Strategic action 5

Scale up and innovate



How to expand programmes, engage with the private sector, and use digital solutions



This document is a working draft of the *Nurturing* care handbook that will be finalized in the second quarter of 2021. We hope you find it useful in guiding your efforts to implement the *Nurturing* care framework.

The handbook is unlikely to respond to all your needs and therefore, we welcome your questions, feedback and suggestions. Do not hesitate to contact us at NurturingCare@who.int or complete the online questionnaire at https://nurturing-care.org/handbook

We look forward to hearing from you.

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Scale up and innovate

How to expand programmes, engage with the private sector, and use digital solutions



This handbook is composed of 6 guides, each of which are available as self-standing documents. Each of the five strategic actions of the *Nurturing care framework* has a section dedicated to it, and the *Start here* section provides a general orientation to the handbook.

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Users may read all, or parts of the handbook, depending on their needs. It is recommended to read *Start here* before going to any of the other guides.

The handbook is meant to be a living document with guidance and resources that will be regularly updated as more experiences are gained in the implementation of the *Nurturing care framework*.

The use of this handbook is supported by the nurturing care website, a vibrant portal with country experiences, thematic briefs, tools, news items, and expert voices. Always consult https://nurturing-care.org for new information that can be relevant to the issues that you like to address.

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This handbook is part of a set of resources for implementing the *Nurturing care framework*. Partners continue to collaborate in global working groups to expand this set, facilitated by staff at WHO, UNICEF, the World Bank Group, the Partnership for Maternal, Newborn, and Child Health (PMNCH) and the Early Childhood Development Action Network (ECDAN).

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Using this handbook

This is part of the *Nurturing care handbook*, a practical guide to using the *Nurturing care framework* to improve early childhood development.

If you have not already, you will probably find it helpful to take a quick look at the first part of the handbook: *Start here.* This explains in more detail how the handbook works, what nurturing care is, and how to get started. It also includes practical advice on working in programme cycles, engaging all stakeholders, and doing advocacy.

After *Start here*, the handbook is divided into five strategic actions, each explained in a separate guide:

- 1 Lead and invest
- 2 Focus on families and their communities
- 3 Strengthen services
- 4 Monitor progress
- 5 Scale up and innovate

You can find out more and download the rest of the handbook at https://nurturing-care.org/handbook

STRATEGIC ACTIONS











Understanding Scale up and innovate

What is this strategic action?

In the *Nurturing care framework*, this strategic action has a different title: Use data and innovate. That is because our ideas have developed during the two years between creating the *Framework* and finishing this handbook.



We realized that using data is a part of every strategic action, so it felt a bit misleading to call particular attention to it here. And in this guide, we found that the main use of data was in scaling up – an important topic, and one about which there is much to say.

So, this guide focuses on how to take a project from a small-scale test site or pilot, and expand it to offer more services, reach more people, or cover a larger area. In doing that, you will of course be guided by data, and we explain the best ways to collect and use data for this purpose.

We also look at two particularly innovative ways of scaling up: engaging the private sector and using digital solutions. Needless to say: both involve using data too.

What will this strategic action enable me to do?

The *Nurturing care framework* describes five outputs for this strategic action:

- Develop a local evidence base for nurturing care by fostering collaboration among programme implementers, researchers and scientists.
- Lead by identifying local research priorities, and making resources available for implementation research.
- Use local and global evidence to create innovations that can be scaled up.
- Support a national platform for learning and research and form communities of practice to enable peer learning.
- Document and globally publish research findings and lessons learned.

For practical purposes, it is easiest to approach this as three subjects:

Scaling up

This is the main part of the guide, discussing how to expand your programmes to produce those five outputs.

Engaging with the private sector

This explores an innovative and sometimes neglected way of scaling up. We look at how both missionand profit-driven companies can contribute to nurturing care.

Using digital solutions

This looks at another innovative way of scaling up. We cover how apps, texts, wearables, big data – and more – can be used to improve access to nurturing care, as well as its implementation.

What follows is a collection of suggestions and advice, based on what has worked in countries around the world.

Scaling up

Scaling up means expanding an intervention. There are three different aspects that can be expanded:

- coverage reaching more places
- breadth reaching more people
- depth adding more activities or features to the service.

You can also scale up by using an existing approach to address a different problem.

No matter how you are scaling up, you need to plan for it thoroughly and as early as possible. In nurturing care, scaling up is particularly complex, because so many sectors and services are involved in creating the environments that enable children to develop. The process is made more complicated and unpredictable by the way all the different elements interact with each other. For example, promoting early and exclusive breastfeeding can only work if other factors support it: maternity facilities need to become baby-friendly; women need maternity leave that meets the standards set by the International Labour Organization; and employers need to invest in good private spaces for mothers to express and store breastmilk at work.

When you begin to scale up, your plans will usually be based on local implementation experience or studies showing what has worked in the past – often elsewhere, on a smaller scale and with more resources. It may be difficult to see how experiences that worked elsewhere can be adapted to meet your own real-life situation. That is why it is important to start small, adapt evidence to your local conditions, and look at what your own data are telling you. And when you are planning a demonstration project, think about the scaled-up intervention you would like it to become. For more details, see the box on *ExpandNet's guides to scaling up*.



ExpandNet's guides to scaling up

ExpandNet has worked with WHO to produce tools, guides, and other resources that are widely used to scale up interventions – by country teams, projects and institutions.

These are based on comprehensive literature reviews and its members' extensive experience of major scale-up initiatives.

There is a tool for each of the three phases of scaling up:

Beginning with the end in mind

This tool helps you design and implement with scaling up in mind, whether in a pilot, a demonstration, or an implementation research project. It is also helpful for course-correcting when these projects are already underway. It is available in English and French.

Nine steps for developing a scaling-up strategy

This tool and its associated worksheets give step-by-step guidance on developing a strategy for scaling up, based on the ExpandNet framework. It can also help with managing the scaling-up process. The tool is available in English, French and Spanish, and the worksheets are available in English and French.

Practical guidance for scaling up health service innovations

This tool gives you general principles for scaling up, as well as case-study examples of where it has been done successfully. It is helpful at the design stage, during implementation and in managing the scaling-up process, and it is available only in English.

To get these tools (and worksheets), visit ExpandNet's tools and publications webpage (1).

Suggested actions

Get people involved

Scaling up works best when many stakeholders work together. Government needs to lead from the beginning, but there are also important roles for civil society organizations, development partners, professional associations, private-sector organizations, researchers and other influencers – at all levels, including in communities.

When you are still learning about implementation, involve policymakers, national and local programme managers, technical experts, and researchers. This allows all those involved to build up experience together, which will help them plan the scaling up. Make sure you include not only people responsible for policy and implementation, but also those who will benefit from it. Engaging them in the process means the interventions will be relevant, appropriate, feasible and sustainable (see the box *Towards sustainable impact at scale*).

TOWARDS SUSTAINABLE IMPACT AT SCALE

Government is a critical player in ensuring that solutions reach communities at scale. Social impact organizations, governments and funders often share an ambition for government-owned solutions. But how best do these actors collaborate together to successfully navigate to these solutions? Spring Impact and VillageReach, in collaboration with government, funders, and social impact organizations from 16 countries, have co-created a tool to support government ownership of solutions. Read the tool *The journey to scale with government (2)* to learn about the steps and the tools to build collective ownership.

Focus on sustainability from start to finish

Overall, the best way to make sure that activities are sustainable is to avoid doing things in isolation. Bring in other stakeholders, as we mentioned in the previous suggested action, and keep them on board by being realistic about how long it will take. From the very beginning, think about everything that the project involves, and how you will make sure all of it will continue once the initial phase is over and the intervention is being scaled up. That includes funding, champions and leaders, community engagement, and standards and policies – all subjects covered in other guides in this handbook.

Agree on what to expect

Get key stakeholders to discuss their expectations and vision for the scale-up. Temper any hopes of quick results, and be sure that everyone understands the time and effort it will take to have a measurable impact. Discuss the importance of monitoring, documenting, reviewing and learning, and how these processes can identify barriers as well as good practices. Encourage people to resolve difficulties by constantly adapting, and to spot and seize opportunities for innovation.

Test the intervention

Testing the intervention in several demonstration sites gives you more information about how the scale-up process will work, as well as helping to show whether it is effective where you are. Design the process based on what you need to find out. That could mean using a more rigid randomized controlled trial, or a more flexible design that allows for experimentation with different approaches. The demonstration needs to produce evidence to show that the programme is credible and relevant, responds to local needs, and has an advantage over other interventions. And remember that context is everything: approaches that have proven to be effective elsewhere may not automatically lead to good outcomes in your context. See The Saving Brains programme - scaling up in Bangladesh for an example.



THE SAVING BRAINS PROGRAMME - SCALING UP IN BANGLADESH

The Saving Brains programme, funded by Grand Challenges Canada, supports bold ideas to improve early brain development around the world. Between 2011 and 2016, it gave 108 grants to teams based in low- and middle-income countries (LMICs). Most of these grants were for "seed" projects, lasting 18–24 months and designed to provide proof of concept. That was because few of these countries had implemented interventions to improve early childhood development at scale, and there were no consistent measures of coverage and quality. But a few of the grants were for "transition to scale" (or TTS) projects, lasting 2–3 years and aiming to scale up interventions.

In one of these TTS projects in Bangladesh, local researchers assessed how a responsive care intervention could be integrated in health and nutrition services, using an approach that had shown to be effective in high-quality local trials. Using an adapted version of material from *Reach Up and Learn (3)* (covered in the guide to *Strategic action 3)*, they ran a cluster randomized trial to assess the impact of the intervention to promote responsive caregiving, integrated in routine primary health services.

Based on positive results, the team then did a study to assess whether the intervention could be scaled up. They found partners in government and got permission to involve the primary health workers and government infrastructure. This study also found a positive impact, on children's cognition, language, motor skills and behavioural ratings. The approach is now ready to be scaled up using a systems approach, targeting 13 000 primary health care clinics around Bangladesh.

For more detail on the Bangladesh project, read Integrating an early childhood development programme into Bangladeshi primary health-care services: an open-label, cluster-randomised controlled trial (4).

Keep it simple

Make sure the intervention is not too complex to implement. Work within existing systems and do not engage in activities that are hard to sustain, like recruiting new frontline workers or setting up parallel services. And take care that the implementation does not demand attention and resources in a way that impairs the system's capacity to do other activities – and so ends up reducing the quality of care, or the performance of other services. A good way of keeping complexity under control is to phase in the intervention's components one by one. Simplify each one and eliminate anything unnecessary before testing all the components together.

Document and use data

When you are scaling up, document everything you do. This will give you a record of how you solved the problems that will inevitably emerge, allowing you to recognize them in the future. Sometimes that will give you a ready-made solution or point you towards an innovation that you can use again in similar situations. And sometimes it will help you to develop your general problem-solving process. Both can be very helpful, not just in scaling up the current intervention, but in others that need scaling up in future.

When documenting, use both quantitative and qualitative methods. Quantitative assessment and documentation are covered in the guide to *Strategic action 4*, and include looking at indicators for inputs, outputs and outcomes. Qualitative assessment includes, for example, interviews with frontline workers and clients, observations during supervision visits, and discussions in focus groups.

Learn in a real-world environment

When implementing small-scale programmes, partners often provide more resources – human, financial, technical, and importantly motivation and visibility – than the public system normally would or could afford. To find out what day-to-day operational realities and resource constraints the scaled-up programme will face, implement the small-scale initiative in the regular system from the beginning. Keep monitoring and learning while you scale up, and adapt as you go (see the box *TDR Implementation Research Toolkit*). And even when you are ready to scale up, remember that there may be populations or areas that will require further adaptation.



TDR Implementation Research Toolkit

This toolkit gives you a standard process for doing implementation research, with results that can be compared across regions and countries. It helps you to identify bottlenecks, choose which stakeholders to involve, come up with research questions, do the research, and then make a plan for implementing the results.

In an ideal world, all interventions would be based on three different types of research, following in smooth steps. First there would be efficacy studies (does it work at all?), then effectiveness studies (does it work within existing systems?), and finally implementation studies (does it work when scaled up using only resources available to existing systems?). In reality, challenges often get in the way of following this systematic approach, such as scarcity of resources, or a desire to act fast.

The TDR Implementation Research Toolkit (5) takes account of those practical challenges. It shows you how to use implementation research to understand your local context, improve performance, and strengthen systems and services. All of which helps you to scale up interventions and make them sustainable.

Build centres of excellence

Centres of excellence – national or regional – can support local implementation research with technical assistance and shared data collection. They can also make sure that the lessons learned are shared locally, nationally and sometimes internationally. The box *Centres of excellence in South Africa* provides a practical example.

CENTRES OF EXCELLENCE IN SOUTH AFRICA

In South Africa, centres of excellence have been established in several disciplines by the Department of Science and Innovation (DSI) and National Research Foundation (NRF). These centres of excellence are places – physical or virtual – where researchers from different disciplines and institutions can collaborate on long-term projects. The projects are locally relevant as well as internationally competitive, improving the standard of research and leading to better implementation.

One of these is the Centre of Excellence in Human Development (CoE-Human) – the only one in the human and social sciences. The CoE-Human identifies high-quality human development research worldwide, as well as supporting it and producing its own. This – along with training and networking – helps to expand research capacity in the country. It also makes research findings available, supporting human development in South Africa and beyond.

To find out more, visit the CoE-Human website (6).

Form communities of practice

A community of practice is a group of people with a shared practical interest, and often a common goal, who interact with each other regularly in order to learn how to get better at what they do. That includes talking about their experiences, sharing good practices, successes and failures, identifying common challenges, and advocating for what they believe in. Through all these activities, they learn from each other.

As you are starting the process of scaling up, help to create communities of practice. They can be local, perhaps bringing people together from different primary health care centres in the area. Or they can be national, bringing practitioners and researchers together from different districts, or even international, with representatives from all over the world. They come in different forms, but all help their participants make progress (see box *Global and regional networks*).

GLOBAL AND REGIONAL NETWORKS

Sharing the latest innovations and research is a critical part of scaling up nurturing care. Since the release of the *Nurturing care framework*, there has been a lot of work on this front. There are global working groups headed by WHO, UNICEF, the World Bank Group, the Partnership for Maternal, Newborn, Child and Adolescent Health (PMNCH), and the Early Childhood Development Action Network (ECDAN), aided by many organizations from the public and private sectors, and civil society.

Four regional networks bring together resources, build capacity, help to exchange information between countries and among stakeholders, and deepen the understanding of concrete implementation issues and how to address them. These are the Africa Early Childhood Network (7), the Arab Network for Early Childhood Development (8), the Asia Pacific Regional Network for Early Childhood (9), and the International Step by Step Association for Europe and Central Asia (10).

ECDAN is an important global mechanism for sharing information. It was created in 2016 by UNICEF and the World Bank, and is supported by WHO, UNESCO and hundreds of civil societies, multilateral and bilateral organizations, foundations, businesses and researchers. ECDAN connects organizations' efforts at the global, regional and country level. It helps them exchange knowledge and learn, transparently and collaboratively, and advocates for increasing investment in quality early childhood services. To get helpful resources, take part in taskforces, working groups and webinars – or if you are thinking of joining – visit ECDAN's website (11).

Share your findings widely – whether positive or negative

Much of the data collected globally is never published – neither in peer-reviewed nor grey literature. That means a huge amount of useful information is lost. Some of this is because negative results – those that do not prove something is effective – are discarded. In fact, these can be just as valuable as positive ones, helping to avoid wasting resources on interventions that do not work or cannot be scaled up. It is vital that all stakeholders document their research findings and share lessons learned with other demonstration sites and communities of practice, as well as sharing experiences in blogs, peer-reviewed or grey literature, and policy briefs.



Overcoming the barriers

Overburdening systems and the workforce

It is a good idea to combine several complementary interventions, and to integrate them in existing systems. For example, well-child visits may not only include activities to support early learning and responsiveness to the child's needs, but also give attention to the caregiver's mental and physical health.

However, there is a danger of overburdening those systems and the people who work in them. The quality of an existing service can be compromised if you try to integrate too many new interventions or procedures at the same time. So think carefully about what is required to make the new activities work – in terms of time, money, and people. One way of avoiding overburdening systems and people is to share tasks between sectors and stakeholders, with each responsible for the activities where they have the strongest technical skills. This puts the initial emphasis on coordination, which may – at least early on – be easier to achieve than integration.

Motivation and reward

You can also avoid overburdening frontline workers by helping them feel a sense of self-determination, an interest in life-long learning and in professional development. Do this by focusing on their intrinsic motivation, such as the desire to serve and to help children and their community. But focus just as much on extrinsic motivation, like adequate pay and working conditions. Also make sure they are mentored regularly and get supportive supervision. The guide to *Strategic action 3* suggests more ways of giving the workforce the capacity they need.

Missing hard-to-reach populations

When new interventions are introduced, those who are in greatest need are sometimes the last to benefit. That makes it important to consider equity from the start, identifying vulnerable families or populations, and thinking of ways to reach them. Local solutions include community mapping and outreach. Or there are policy solutions, such as conditional cash transfers for the poor. When scaling up, monitor the participation of the most vulnerable families and children, and make it a measure of success.

Ignoring the costs

Development funds are often used to expand activities without any assurance of long-term, sustainable financing. Government funding is essential for scaling up and long-term sustainability, so it is very important to get a budget line in national and local

sector plans. Work on funding mechanisms from the beginning, so that there is enough for scaling up, and it is reliable and sustainable. As well as funding from the government and donor agencies, you may find other options useful, such as social franchising models, social entrepreneurship, and community fundraising (see box *Alternative funding options*). Read the section on financing in the guide to *Strategic action 1* to learn more about the options.

ALTERNATIVE FUNDING OPTIONS

Social franchising

This works like a commercial franchise, but for social benefit rather than private profit. The term includes any independent, coordinated network that supports its members' activities. There is more on this in an article in Harvard Health Policy Review (12).

Social entrepreneurship

This is where people – whether individuals, groups, start-up companies or entrepreneurs – develop, fund and implement their own solutions to social, cultural, or environmental issues. Again, the goal is social value, not personal profit. There are more details in an article in Technology Innovation Management Review (13).

Community fundraising

This is when a large number of people – a community – each makes a small donation to a good cause, often something organized and carried out by local volunteers. There are more details in a post on Goodbox (14).

Suboptimal monitoring and evaluation

Having adequate processes for monitoring and evaluation allows you to collect data in a structured way, and to be transparent. Integrate data collection into the country's health information system, including indicators for inputs, outputs and outcomes. Keep the user in mind when you design monitoring and evaluation systems. And make sure that the data you collect is not only used in scientific publications, but also to keep frontline workers accountable and professional, to improve the services, and to solve problems.

Engaging with the private sector

Interventions that support nurturing care do not always have to be delivered or funded by governments. Governments may not have sufficient resources, or early childhood development may not be high enough on their list of priorities. An alternative or complementary - way of scaling up interventions that support nurturing care is to engage with private-sector organizations, with their financial and technical capabilities. This can have other benefits: encouraging organizations to improve their own working practices to reflect nurturing care, which can influence others in their industry to follow suit. It also fits in with the ethos of sustainable development, which calls for the public and private sectors to make a joint commitment to the next generation - one that encompasses more than finances, and is built on shared social responsibility.

There are several strategies for engaging the private sector. One is the philanthropic approach, appealing to budgets and departments for corporate social responsibility (CSR). A more innovative strategy is to encourage what is often called "creating shared value". This means the company pursues commercial success in a way that also has social benefits, using its products, services, people, infrastructure, brand and networks. Creating shared value works differently for mission-driven and profit-driven businesses.

Mission-driven businesses

These include social enterprises, and are usually small- and medium-sized companies whose motivation is to use their products or services to solve social challenges. They aim to produce profits in a sustainable way, so that they need less outside support, whether from the public sector or other companies.

Because mission-driven businesses can offer investors a financial return, they can attract private capital for nurturing care. This can be what is called "impact investing": investments that aim to produce a positive impact as well as a financial return. Stakeholders in these businesses can also include social entrepreneurs, incubators, accelerators and microfinance institutions. To learn more, read the box *Kidogo - a for-profit social enterprise in Kenya*.

KIDOGO - A FOR-PROFIT SOCIAL ENTERPRISE IN KENYA

Mission-driven businesses can play a vital role in expanding the reach and scale of quality services for children. Some target the *Nurturing Care Framework*'s key challenges, such as responsive caregiving and opportunities for early learning.

Kidogo is a for-profit social enterprise based in Kenya. It trains female entrepreneurs (it calls them "mamapreneurs") and supports them in starting or expanding their own micro-businesses offering childcare in their local communities.

Kidogo trains these women in mentoring, entrepreneurship, health and nutrition, and early childhood care and education. The aim is to improve the quality of services for young children. It also gives the entrepreneurs a starter kit of resources for their centres, as well as ongoing quality assurance to maintain Kidogo's standards.

Kidogo also has a small number of centres of excellence in Nairobi. These are used for training, to pilot innovations, and to demonstrate best practices for childcare and early learning in low-resource environments. And they are also helpful for advocacy and engaging with the broader community.

To get in touch or read more about their work, visit Kidogo's website (15).

Profit-driven businesses

The majority of businesses – including, of course, multinational corporations – are driven by the profit motive. Nonetheless, their value chains reach millions of families, giving these companies a powerful role in shaping children's environments.

These companies can help to promote nurturing care, both in the course of their core business activities – that is, their products, services, people and infrastructure – and especially in their role as employers. They can bring in family-friendly policies, such as providing good-quality childcare on the premises, making work spaces breastfeeding-friendly, and providing paid parental leave.

You can engage with them in both these areas, by making contact with their corporate social responsibility and human resources departments. In this way, you can also influence how the company's leadership decides investment priorities (see box *Mobile Creches*).

Other important ways of engaging with these companies include networks, business coalitions, cross-sector alliances, chambers of commerce, and industry and employers' associations. You can encourage these networks to spread best practices. Sustainability indices (such as the Dow Jones Sustainability Index) can also help, rating companies' behaviour and encouraging compliance. But to enforce standards, national policies are needed, which can also offer tax and financial incentives to businesses, encouraging investment.

MOBILE CRECHES

Mobile Creches is an Indian non-governmental organization, and one of its main programmes helps the families of migrant construction workers, who live where they work – on the building sites of Delhi. For them, it provides a comprehensive package of quality services for early childhood development.

Mobile Creches has a hybrid business model, using both employers' contributions (mandated by law) and grant funding. It provides activities and interventions for children from birth to the age of 6, supporting their holistic development. It also trains community childcare workers in early care. And it advocates nationally for policy change, effective legislation and improved services for young children, by improving institutional structures, quality, coverage and budgets.

To get in touch or find out more about their work, visit Mobile Creches' website (16).

Increase awareness among business leaders about how important nurturing care is - for economic returns, human capital, and the welfare of employees and their families.



Suggested actions

Advocate for nurturing care

Business leaders generally know very little about nurturing care. To increase awareness you will need to conduct advocacy, spreading the word about how important nurturing care is – for economic returns, human capital, and the welfare of employees and their families. Without this, it will be difficult to make progress. The box *How governments and businesses can make the workplace family-friendly* provides links to useful resources.

HOW GOVERNMENTS AND BUSINESSES CAN MAKE THE WORKPLACE FAMILY-FRIENDLY

Family-friendly policies are good not just for families, but for businesses and economies. And yet, around the world, not enough parents benefit from policies such as paid parental leave, breastfeeding breaks, childcare and child grants. This is despite the fact that investing in family-friendly policies pays off in healthier, better-educated children, greater gender equality and sustainable growth, as well as being linked to improvements in employees' productivity, and in recruitment, motivation and retention.

To find out more, read UNICEF's evidence briefs, Redesigning the workplace to be family-friendly: what governments and businesses can do (17), which includes links to policy and evidence briefs.



Breastfeeding support in the workplace

This document provides recommendations to help employers establish breastfeeding rooms and supportive workplace environments for workers and their families. It highlights the benefits of breastfeeding support for the company, for the mother and child, and for society and the environment and offers advice on how to provide breastfeeding support during COVID-19.

To find out more, see Breastfeeding support in the workplace: a guide for employers (18).

Make a business case and talk their language

Business leaders will look at your ideas from their own perspective, so frame your messages with care. You need to make a business case based on human and financial capital, speaking the language of business. For example, you could emphasize the demand among their employees for good-quality childcare services, and how this could improve productivity and employee retention. Other possible business benefits include recruitment, diversity (by keeping women in the workforce), compliance, employee relations, and reputation.

It is also important to make sure you are talking to the right people. Connect with decision-makers, such as CEOs, the heads of corporate social responsibility and human resource departments, and also senior staff working on strategy, business development and product development (see *Breastfeeding support in the workplace* and *A guide for employer-supported childcare*).



A guide for employer-supported childcare

This practical guide helps private-sector companies to improve the childcare they offer, including its quality, financial sustainability, and measurement of results. It is part of the World Bank's Tackling Childcare initiative, and was developed for companies who want to become more family-friendly employers.

The guide gives practical help with designing and implementing a childcare programme that meets the needs of employees, communities and the business. Rather than offering a one-size-fits-all solution, it presents options that can be tailored to the company's circumstances.

To find out more, read Tackling Childcare: a guide for employer-supported childcare (19).

Create an environment that encourages companies to change

If you are a national policy-maker, look at policies that encourage businesses to be more family-friendly. Examples are financial and tax incentives, or some kind of public recognition. Also consider ratings such as the Dow Jones index in your policy-making (see the box). Work with stakeholders and decision-makers in companies to create an environment that encourages them to change.

Advocate for international familyfriendly policies

There are international calls for all countries to introduce policies supporting family-friendly care in the workplace and beyond. These include the International Labour Organization's Convention 183 on maternity protection, and the *International Code of Marketing of Breastmilk Substitutes*, which was adopted by WHO Member States. Advocate for these policies to be implemented in national laws and regulations. And when the policies are in place, advocate for a solid monitoring system and thorough enforcement (see the box *Two examples of promoting family-friendly policies*).

TWO EXAMPLES OF FAMILY-FRIENDLY POLICIES

A good example of government action comes from Paraguay, which has a regulatory framework on family-friendly policies. This requires that all employers with more than 50 employees (regardless of their gender) offer childcare facilities for children under 2 while their parents work.

Patagonia, a multinational outdoor clothing company, gives all its employees health care, paid sick leave, paid maternity and paternity leave, access to on-site child care (at their head offices and distribution centre), and financial support when it is needed, among other benefits. The company feels that – as well as being the ethical thing to do - supporting working families also has business benefits, including tax advantages and better employee retention and engagement. It also sees other benefits, including more women in management, more loyal employees, and a stronger culture of trust. It tracks these benefits closely, so there is evidence to support the company's policy.

DOW JONES SUSTAINABILITY INDICES (20)

A private-sector example is the Dow Jones Sustainability Indices (20), which guide the corporate social responsibility efforts of many multinational corporations. The indices measure companies on a range of health and well-being criteria that support nurturing care, including flexible working hours, working from home, childcare facilities and contributions, and paid parental leave.

Mobilize private capital

It is also important to mobilize private capital to help mission-driven businesses, with microfinance and impact investing being good sources. The World Bank's Early Learning Partnership (see the box) is an example of how to do this.

THE EARLY LEARNING PARTNERSHIP

The Early Learning Partnership (ELP) is a multidonor trust fund managed by the World Bank. It uses the World Bank's strengths – including its global presence, access to policymakers and strong technical analysis – to improve early learning opportunities and outcomes for young children around the world.

The initiative enables World Bank staff and partners to apply for funding to support early learning and early childhood development in their investment portfolio. For example, in a country where there is a cash transfer programme, a team could apply to ELP for money to develop accompanying measures that promote nurturing care. It is a competitive process, responding to countries' needs and opportunities, stimulating creativity, and channelling funding to where it can be used most effectively.

To find out more, including the activities going on in each country, visit the Early Learning Partnership's webpage (21).

Overcoming the barriers

Lack of expertise in the private sector

Companies can lack the technical know-how – as well as the incentives – to choose the investments that are most effective in supporting nurturing care. They can overcome this by asking for help from governments, national centres of excellence and multinational development agencies, as well as local funders and universities.

Excluding people by failing to collect the right data

The people who need help most – including the most vulnerable – are most likely to be missing from the data that companies collect. This is true for both mission- and profit-driven businesses. For example, mission-driven businesses will find it easiest to collect data on paying customers, neglecting those who need their services but either do not or cannot pay. And profit-driven businesses will tend to have least data on the parts of their value chain that are in the informal sector, such as street vendors. Being aware of this makes it easier to correct for.

Unwillingness to pay for nurturing care services

In childcare, and especially day care, unpaid or underpaid work is everywhere. This is self-reinforcing, making people undervalue the services and less willing to pay for them. The result can be to make mission-driven businesses less viable in this sector. Family-friendly workplace policies can help to change that – if there is advocacy both for the policies and for nurturing care in general.

The people who need help most – including the most vulnerable – are most likely to be missing from the data that companies collect.

Using digital solutions

For nurturing care, digital solutions include smartphone apps, text messages (sent by short message service, or SMS), interactive voice response (digital services that talk and listen), health management information systems, mobile diagnostic devices, wearables (such as hats that monitor young children's vital signs), and big data analytics. There is growing evidence about which of these work best, in which circumstances, and at what cost. In 2020, the COVID-19 pandemic has given an impetus to using digital approaches, to compensate for restrictions in access to and use of services by caregivers and their children (see the box COVID-19 emergency parenting response).



COVID-19 EMERGENCY PARENTING RESPONSE

The global pandemic has created extreme stress for children's caregivers, with school closures, lockdowns, economic disruption and increasing mental health problems. The *Parenting for Lifelong Health* consortium of experts responded rapidly, in collaboration with WHO, UNICEF, the Global Partnership to End Violence against Children, USAID, CDC, UNODC and others.

They adapted evidence-based parenting messages in resources that could be delivered digitally, including tip sheets, social media posts, public-service announcements and radio shows. The adapted resources focused on one-on-one time of caregivers and children, praise, playful nurturing care, and stress reduction for caregivers. They have also been adapted to fit public health advice on COVID, and they include guidance on online safety for children.

These resources were translated by volunteers into over 100 languages and made open source. They were then further adapted for local contexts, families with disabilities, and refugee and conflict settings – by NGOs, faith-based organizations (such as World Without Orphans) and UN agencies.

Between April and October 2020, these resources were scaled up globally, reaching 86 million people in 182 countries, and 29 governments used them in their national COVID responses.

There is more information on *Parenting for Lifelong Health*'s website (22).

Digital services offer exciting new opportunities. They make it possible to collect information in real time, and to share information between frontline workers (see the box *RapidPro*). They can also communicate with caregivers about the quality of home care practices, the child's developmental progress, and what happens in community health workers' home visits – among much else.

RAPIDPRO

RapidPro is an open source software solution that enables users to easily design, pilot, and scale messaging services that connect directly with a mobile phone user. It allows users to collect real-time information on vital areas such as health, nutrition, education, water and sanitation, and child protection - even in remote and hard-to-reach places – and use that data to reach those in most need. Produced by UNICEF's global Innovations Labs in collaboration with Nyuruka, a Rwandan software development firm, and drawing on eight years of experience with SMS-based applications, RapidPro is already being used in over eighty countries. Examples include health platforms to boost immunization in Indonesia, antenatal support for mothers in Cameroon, and the creation of a database to enable the early identification of and support to families with children with developmental delays and disabilities.

To find out more, visit the RapidPro (23) and UNICEF (24) websites.

It is vital to identify vulnerable children and families as early as possible. Data science can help with this, using so-called "big data" to connect separate datasets. This can include linking systems for tracking child development to datasets on wider adversity. As a result, a range of care providers can access the same clients' data – as well as, ideally, linking caregivers and children to social protection benefits.

D-TREE - USING MOBILE APPS TO IMPROVE NURTURING CARE

dTree International uses mobile technology to improve nurturing care around the world. In Malawi, it has developed a mobile app that uses WHO's *Emergency Triage Assessment and Treatment* (ETAT) algorithm to help community health workers systematically assess children for signs of illness as they wait to see a clinician.

The organization has also developed a comprehensive app that now covers more than 1000 of Malawi's 11 000 village clinics. Health surveillance assistants (HSAs) use it to diagnose and treat patients, as well as to manage medicine stocks and compile their statistical reports each month.

In Zanzibar, dTree has been working with the health ministry since 2011 to improve community maternal and neonatal care. Its mobile app – *Safer Deliveries* – is used by community health workers (CHWs) in home visits. It enables CHWs to create personalized birth plans, identify danger signs and refer women and families to health facilities. Managers use its data to improve services and the app itself. As a result, facility delivery rates are up 50%, and postpartum follow-up has increased fourfold.

You can find out more at d-Tree International's website (25).

Digital solutions can be an effective part of a systems-thinking approach, helping to improve monitoring, collect data and scale up nurturing care interventions so as to achieve early childhood development goals (see box *d-Tree using mobile apps to improve nurturing care*). But keep in mind gender equity concerns, including men's and women's different rates of household mobile-phone ownership. The *Mobile gender gap report 2020 (26)* shows that women in lower- and middle-income countries (LMICs) are 8% less likely than men to own a mobile phone, and 20% less likely to use the Internet on a mobile. This means that 300 million fewer women than men use mobile Internet.

Suggested actions

Be realistic

Be realistic about where digital technologies can, and cannot, add value in your setting. Adopting new digital solutions can be a challenge, with frontline workers' existing workload and everything that is already going on. Digital solutions should be used to complement and improve services, rather than replacing parts of them. For more on this, see the box WHO Recommendations on digital interventions for health system strengthening.



WHO Recommendations on digital interventions for health system strengthening

In 2019, World Health Organization released a new guideline with recommendations on 10 ways that countries can use digital health technology – mobile phones, tablets and computers – to improve people's health and essential services. The recommendations are based on a critical evaluation of evidence from interventions, including assessments of benefits, harms, acceptability, feasibility, resource use and equity.

The guideline is aimed at decision-makers in health ministries, public health practitioners, and anyone else who wants to know which digital health interventions have an evidence base for addressing health systems' needs. It concludes that digital health interventions should not be seen as a substitute for functioning health systems, but can be a useful complement to them.

To find out more, read the WHO press release summarising the guideline (27), or get the full document Recommendations on digital interventions for health system strengthening (28).

Invest in development

Before you start, remember that effective solutions usually need a lot of formative research and testing. Start by assessing the end users' needs, the workforce's capabilities, the health system's capacity, and the behavioural and organizational changes that will be required. Read the box *The Internet of Good Things* which can be a useful resource.

Work within your context

Context is key. Design and implement digital solutions with this in mind. Many digital solutions are available worldwide, but they will still need to be adapted to your setting, with its languages and cultural norms, to make them acceptable to users. Also think about the information and communication technology (ICT) where you are, and how its capacity might increase over the next two or three years.



The Internet of Good Things (IoGT)

The Internet of Good Things (29) has free content for mobile phones that can save and improve lives, and it works even on low-end devices. It helps communities and frontline workers get local, up-to-date information at the point of care, and it is available even where Internet access is minimal. Community health workers can download material to use in home visits to give parenting or health advice.

Follow recommended principles

Despite all the advances in technology and its use, some digital programmes have failed. The reasons were often both predictable and preventable, so it is important to use the well-established principles when designing services (see the box *Principles for Digital Development*).

PRINCIPLES FOR DIGITAL DEVELOPMENT

In the late 2000s, donors and implementers began to recognize that digital development programmes were fragmented, uncoordinated, siloed, and struggled to scale up or sustain themselves in the long term.

So in 2014, the Principles for Digital Development Working Group was established to tackle those challenges and share best practices. It is made up of donors, implementers and development practitioners, and meets nine times a year.

The current principles are:

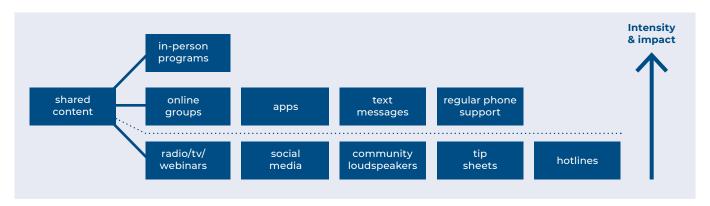
- · design with the user;
- · understand the existing ecosystem;
- · design for scale;
- · build for sustainability;
- · be data driven;
- use open standards, open data, open source, and open innovation;
- · reuse and improve;
- · address privacy and security;
- · be collaborative.

To find out more, visit the Principles for Digital Development website (30).

Segment your audience

The most effective approach may be to use digital solutions to complement face-to-face contact. The key is to choose the right medium for the target audience. A mother, for example, might benefit most from joining an online parenting group, a father might prefer to get parenting tips by SMS, and a grandmother might enjoy a TV drama or a radio programme that promotes positive parenting. Think carefully about the options, assess how feasible they are in your context, research different groups' preferences, and then design interventions using a mixture of methods – as the Figure illustrates.

Figure. Different options for adding digital solutions to programmes



Take action on privacy and security

Pay constant attention to safeguarding the privacy and security of young children and their families when they use digital platforms. Make sure there are systems to ensure data privacy, ownership, access, integrity and the protection of users' information, and that these systems meet national legal standards.

Use digital technology to make services more accountable

Digital technologies make information and services more accessible, with better coverage and quality. This increased access to information can be used by caregivers and practitioners to demand new or better services that support nurturing care for their communities.

Overcoming the barriers

Frontline workers' capabilities

Think about frontline workers' capabilities and how unfamiliar the technology may be to them. Support them by giving them training, mentorship and supervision, tailored for them and ongoing. Ensure that they have access to a stable internet connection, along with free credit for enough data to send and receive information. This will help them make good use of the investments in digital health.

Remember that any changes will have effects on the whole system and everyone involved. For example, using a digital tool for supervision will affect the supervisor as well as the person being supervised, the time needed, and whether all supervision is in-person. Anticipating these changes, maximizing their benefits, and providing support, can strengthen relationships and systems.

Poor information and communications technology infrastructure

There can be problems accessing digital solutions. Mobile networks' connectivity can be patchy, and batteries can run down quickly, especially in places where the electricity supply is unreliable. That can mean digital solutions do not work where you are. So, before you do anything else, thoroughly assess what you need from the infrastructure in your setting, and whether that is available.

Inequitable access to digital technology

Access to mobile phones is still unequal. Smartphone ownership is is 20% lower for women than for men. So, remember that technologies should complement each other. A good solution in your setting could be for people to get information about nurturing care from the Internet of Good Things (designed for low-end mobiles) and mass-media communications, such as radio and television.

Signs that you are making progress

You can work on the activities in this strategic action in different ways and it is natural that progress in some will be faster than others.

The aim is to work in a systematic way on scaling up of policies and interventions for nurturing care and to use innovations, such as digital technologies and partnership with private sector entities, to reach more children and their families with high-quality information and services.

Here are some signs of progress and targets to aim for:

- Private-sector organizations are actively contributing to implementing national strategies and plans.
- Family-friendly policies have been adopted and are being implemented in public and private sectors.
- Local multistakeholder partnerships have been established and are thriving, along with collaboration on nurturing care research.
- Local research priorities have been set, and the resources – in terms of both money and people – mobilized to achieve them.
- Proven innovations are being implemented at scale and their impact is carefully evaluated. New innovations are being tested for effectiveness and feasibility.
- Digital solutions are included in interventions

 supporting caregivers or monitoring implementation, or both.
- A national learning and research platform has been established, and is supported by local and national organizations. Research findings are widely shared and used to implement and scale up more effectively.



References

Tools, case studies and further reading

1. Tool: ExpandNet's guides to scaling up

ExpandNet. ExpandNet tools and publications. Global: ExpandNet; 2020 (https://expandnet.net/tools/, accessed 17 November 2020).

2. Tool: Fostering government-owned solutions at scale

Spring Impact. The journey to scale with government: a tool to navigate towards government-owned solutions which have sustained impact at scale. United Kingdom: Spring Impact; 2020 (https://www.springimpact.org/2020/10/scalewithgovernment/, accessed 17 November 2020).

3. Tool: Reach Up and Learn

Reach Up. Home page. Kingston: Caribbean Institute for Health Research; 2020 (https://www.reachupandlearn.com/, accessed 17 November 2020).

4. Case study: The Saving Brains programme in Bangladesh

Hamadani JD, Mehrin SF, Tofail F, Hasan MI, Huda SN, Baker-Henningham H et al. Integrating an early childhood development programme into Bangladeshi primary health-care services: an open-label, cluster-randomised controlled trial. The Lancet Global Health. 2019;7:e366-e75. doi: 10.1016/s2214-109x(18)30535-7 (https://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30535-7/fulltext, accessed 17 November 2020).

5. Using implementation research

Training in Tropical Diseases, United Nations Children's Fund, United Nations Development Program, World Bank, World Health Organization. TDR Implementation Research Toolkit. Geneva: World Health Organization; 2020 (http://adphealth.org/irtoolkit/, accessed 17 November 2020).

6. Case study: Establishing centres of excellence in South Africa

DSI-NRF Centre of Excellence in Human Development. Home page. Johannesburg: University of the Witwatersrand; 2000 (https://www.wits.ac.za/coe-human/, accessed 8 September 2020).

7. Africa Early Childhood Network

Africa Early Childhood Network. Home page. Nairobi: Africa Early Childhood Network; 2018 (https://africaecnetwork.org/, accessed 17 November 2020).

8. Arab Network for Early Childhood Development

Arab Network for Early Childhood Development. Home Page. Arab Network for Early Childhood Development; 2020 (https://anecd.mawared.org/en, accessed 17 November 2020).

9. Asia Pacific Regional Network for Early Childhood

Asia Pacific Regional Network for Early Childhood. Home page. Singapore: Asia Pacific Regional Network for Early Childhood; 2020 (https://arnec.net/, accessed 17 November 2020).

10. International Step by Step Association for Europe and Central Asia

International Step by Step Association. Home page. Leiden: ISSA; 2020 (https://www.issa.nl/, accessed 17 November 2020).

11. ECD Action Network

Early Childhood Development Action Network. Home page. Washington, DC: Early Childhood Development Action Network; 2020 (https://www.ecdan.org/, accessed 17 November 2020).

12. Alternative funding options – social franchising

Bishai D, Chakraborty N, Walker D et al. Social franchising to improve quality and access in private health care in developing countries. Harvard health policy review. 2008; 9:184.

13. Alternative funding options – social entrepreneurship

Abu-Saifan S. Social entrepreneurship: definition and boundaries. Technology Innovation Management Review. 2012; 2(2): 22-27 (http://doi.org/10.22215/timreview/523, accessed 5 November 2020).

14. Alternative funding options – community fundraising

Gilbert P. Getting everyone on-board: community fundraising. Manchester: GoodBox; 2019 (https://www.goodbox.com/2019/09/community-fundraising-ideas/#:~:text=What%20is%20community%20 fundraising%3F,volunteers%20within%20the%20local%20 area, accessed 17 November 2020).

15. Case study: Kidogo – a for-profit social enterprise in Kenya

Kidogo. Home page. Nairobi: Kidogo Innovations Limited; 2020 (https://www.kidogo.co/, accessed 17 November 2020).

16. Case study: Mobile Creches

Mobile Creches: Nurturing Childhood Sowing Change. Home Page. New Delhi: Mobile Creches; 2019 (https://www.mobilecreches.org/, accessed 17 November 2020).

17. How governments and businesses can make the workplace family-friendly

United Nations Children's Fund. Redesigning the workplace to be family-friendly: what governments and businesses can do. New York: United Nations Children's Fund; 2020 (https://www.unicef.org/early-childhood-development/family-friendly-policies, accessed 17 November 2020).

18. Tool: Breastfeeding support in the workplace

United Nations Children's Fund. Breastfeeding support in the workplace: a guide for employers. New York United Nations Children's Fund; 2020 (https://www.unicef.org/media/73206/file/Breastfeeding-room-guide.pdf, accessed 15 January 2021).

19. Tool: A guide for employer-supported childcare

International Finance Corporation. Guide for employersupported childcare. In: Tackling Childcare initiative. Washington DC: The World Bank Group; 2020 (https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/gender+at+ifc/resources/guide+for+employer-supported+childcare, accessed 17 November 2020).

20. Dow Jones Sustainability Indices

RobecoSAM, S&P Global. Dow Jones sustainability indices family. Zurich: S&P Global; 2020 (https://www.spglobal.com/esg/csa/indices/djsi-index-family, accessed 17 November 2020).

21. The Early Learning Partnership

The World Bank. Delivering quality early learning for children around the world. In: The Early Learning Partnership. Washington DC: The World Bank Group; 2015 (https://www.worldbank.org/en/topic/education/brief/early-learning-partnership, accessed 17 November 2020).

22. COVID-19 emergency parenting response

Parenting for Lifelong Health. Proven parenting tips and activities for all ages in worldwide languages. In: COVID-19 Parenting. Geneva: Parenting for Lifelong Health, World Health Organization; 2020 (https://www.covid19parenting.com/home, accessed 17 November 2020).

23. Tool: RapidPro

RapidPro, United Nations Children's Fund. RapidPro. New York: United Nations Children's Fund; 2021 (https://community.rapidpro.io/, accessed 15 January 2021).

24. Real-time information: RapidPro

United Nations Children's Fund. Real-time information: RapidPro. New York: United Nations Children's Fund; 2021 (https://www.unicef.org/innovation/rapidpro, accessed 15 January 2021).

25. Case study: d-Tree – using mobile apps to improve nurturing care

d-tree International. What we do. In: d-Tree International Digital global health. Norwell: d-Tree International; 2020 (https://www.d-tree.org/, accessed 17 November 2020).

26. GSMA's Mobile gender gap report 2020

Global System for Mobile Communications. Mobile gender gap report 2020. In: Mobile for development. London: Global System for Mobile Communications; 2020 (https://www.gsma.com/r/gender-gap, accessed 17 November 2020).

27. Press release: WHO guideline on digital health interventions

World Health Organization. WHO releases first guideline on digital health interventions. Geneva: World Health Organization; 2019 (https://www.who.int/news-room/detail/17-04-2019-who-releases-first-guideline-on-digital-health-interventions, accessed 17 November 2020).

28. Tool: WHO recommendations on digital interventions for health system strengthening

World Health Organization. WHO Guideline: recommendations on digital interventions for health system strengthening. Geneva: World Health Organization; 2019 (https://apps.who.int/iris/handle/10665/311980, accessed 17 November 2020).

28. The Internet of Good Things

United Nations Children's Fund. The internet of good things. New York: United Nations Children's Fund; 2020 (https://www.unicef.org/innovation/loGT, accessed 17 November 2020).

30. Principles for Digital Development

Principles for Digital Development. Principles. New York: Principles for Digital Development; 2009 (https://digitalprinciples.org/principles/, accessed 17 November 2020).

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