Decentralising services for diabetes and hypertension in low- and middle-income countries: 6 key policy areas for service planners

Policy brief

This policy brief is aimed at health service planners in low- and middle-income countries (LMICs) who are considering developing national policy and strategies for decentralised non-communicable disease (NCD) care. It synthesises lessons and successful approaches from our research in 5 LMICs (Pakistan, China, Bangladesh, Nigeria and Swaziland) and focuses on diabetes, hypertension, high lipids and cardiovascular disease (CVD) risk reduction.

Background and challenges

Globally, the prevalence of diabetes, hypertension, hyperlipidaemia, and consequent CVD such as heart attacks and strokes, are increasing rapidly. This is due to increases in sugar, oil and salt in the diet and little physical activity.[1,2] Since high glucose, BP and lipids are generally asymptomatic, people with these conditions are commonly diagnosed after presenting with complications such as chest pain or poor vision.

Existing care for diabetes, hypertension and CVDs is poor in LMICs.[3] Politicians and donors are recognising the problem and demanding the development and implementation of decentralised care for NCDs. However, there are many challenges in decentralising services for NCDs in health systems that were originally designed for the care of acute rather than chronic conditions.

This brief details **6 key areas for action** to help health service planners meet these challenges.

1. Health systems planning and funding

a. Decentralise services. With rapid rises in prevalence, centralised services for high glucose, blood pressure (BP) and lipids are increasingly untenable, and inaccessible for most patients.

b. Integrate care for high glucose, BP and lipids as they share the same causes, have overlapping consequences (primarily CVD) and have similar models of care delivery.[4]

c. Support health service planners to acquire the knowledge, skills and resources for long-term care for these chronic diseases.

d. Design policy and strategies for NCD disease management to be appropriate for context, scalable and sustainable.

e. Utilise the skills of expert partners. While ministries of health have the desire to develop decentralised NCD services, they do not always have capacity to develop detailed policy and plans. National NGOs with excellent technical knowledge and trusted relationships with their ministries are valuable partners. Their intimate understanding of local realities are key in developing policy and plans that are feasible, scalable and sustainable.

f. Integrate new interventions within existing services.

g. Identify sources of funding for 5 key areas: 1) policy development and planning; 2) training; 3) equipment and supplies; 4) essential drugs; 5) long-term nationwide monitoring of CVD and diabetes care.

2. Training and supporting healthcare staff

a. Simplify care processes to reduce the burden on busy healthcare staff who may be reluctant to add new processes to their existing duties. Focus first on screening overweight adults and those with symptoms, treating them in primary care facilities and referring those who have more complex or severe conditions.

b. Train frontline health workers to *develop new skills* (eg, history-taking, listening to patients and encouraging lifestyle behaviour change) rather than just helping them *acquire new knowledge.* Use case studies and role plays to train staff as they are popular and effective training tools.

c. Use staff supervision to focus on how to do things better. Ensure supervisors' feedback is immediate and supportive (as opposed to merely critical) and acknowledges the limitations to what staff can realistically be expected to do in specific contexts.

3. Equipment and medications

a. Be realistic about what equipment is available and plan accordingly. Assess whether any additional equipment can be made available at primary care facilities nationwide. For example, the HbA1c test for glycosylated haemoglobin involves sending blood samples to a laboratory for testing and is too expensive in LMICs. Random, then (if high) fasting blood glucose testing, is more feasible as it is done at point of care and uses cheaper glucometer and strip equipment.

b. Develop NCD programmes around the drugs to be used. It is important that the underpinning drugs are easily available from multiple suppliers, are safe, effective and low cost. Examples are metformin and thiazide diuretics.

c. Avoid systems which reward overprescribing or other perverse incentives.

d. Avoid incentives for providers or clients in pilot projects which will not be sustainable or replicable at scale. For example, avoid paying providers more than the government rates for attending training or carrying out supervision during the pilot, or paying patients to attend follow-up appointments.

4. Referral and continuity of care

a. Help busy clinic staff effectively identify, treat and follow up patients within the time limits of routine consultations. Use 'at-a-glance' summaries of care processes (eg deskguides) to help staff. Make guides available during training and in the consultation room and encourage and monitor their use.

b. Use individual patient records. These are essential in NCD/diabetes care. Design records to allow patient data (eg, glucose level and blood pressure) to be easily added and assessed by clinicians and health workers over multiple routine visits to clinics. Paper treatment cards should include rows for each consultation and columns to record, eg, weight, BP and glucose so the clinician can easily see if they are improving or not.

c. Strengthen referral mechanisms, both upwards to specialists, when patients have complex or severe disease progression, and back down to the originating local facility for ongoing routine monitoring and care.

d. Encourage and closely monitor attendance for routine care.

e. Carefully explain the role of medication to patients. Patients may believe they will be cured and not understand the need for follow-up appointments.

5. Personalised and appropriate health advice

a. Offer tailored lifestyle advice. Staff advising patients about health and lifestyle should be aware of patients' individual circumstances and sociocultural contexts. For example, patients may be uncomfortable about admitting to smoking, and poorer people in urban areas may struggle to afford healthier foods such as fruit and vegetables.

b. Ensure lifestyle recommendations are appropriate for each individual, eg it is not sensible to suggest to a manual labourer that he takes more exercise.

c. Consider offering patients advice on how to negotiate changes in household eating habits, rather than simply pointing them to healthier foods.

d. Tailor lifestyle advice and encouragement to individuals. This is a core element of NCD care, but it takes time and skill to deliver. Staff training should incorporate this.

6. Shifting patients' perceptions

a. Educate patients about the role of primary healthcare. In LMICs, patients and communities generally think primary care exists to treat acute problems. They tend to buy drugs for chronic conditions from private pharmacies, as often public services do not have drug stocks available.

b. Tailor community and patient health education.

The importance of small-scale pragmatic pilots

Developing policies and strategies for chronic disease management is complex and requires a system-wide approach. There may be political pressure on programmes to implement nationally within a short timeframe, moving more rapidly than is wise.

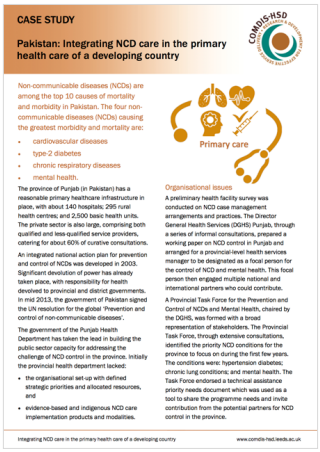
However, piloting is critical. It allows service planners to identify and sort out problems that could have major consequences if left unaddressed, but that are often relatively easy to fix at an early stage. We recommend:

1. small-scale pragmatic pilots, followed by phased scale-up
2. ensuring there are adequate resources for piloting and small-scale assessment
3. discouraging large-scale implementation without initial piloting
4. allowing enough time for piloting
5. piloting under routine conditions rather than using 'demonstration sites' where resource inputs may be artificially high.

Read more about our NCD research and scale-up work

Integrating NCD care in primary health care in Pakistan

In Punjab province, Pakistan, our research has played an important role in helping to prioritise diabetes, hypertension and CVD prevention, leading to better provincial planning and budgeting and the creation of a NCD unit. In both Bangladesh and Pakistan, governments have developed strategic plans for NCD surveillance and prevention. In the Punjab, research-informed guides and tools are being used in province-wide scale-up, and have been received with interest nationally and by the Eastern Mediterranean Regional Office (EMRO) of the World Health Organization for potential adaptation and replication. Read


CASE STUDY

Pakistan: Integrating NCD care in the primary health care of a developing country

Non-communicable diseases (NCDs) are among the top 10 causes of mortality and morbidity in Pakistan. The four non-communicable diseases (NCDs) causing the greatest morbidity and mortality are:

- cardiovascular diseases
- type-2 diabetes
- chronic respiratory diseases
- mental health.

Primary care

The province of Punjab (in Pakistan) has a reasonable primary healthcare infrastructure in place, with about 140 hospitals; 295 rural health centres; and 2,500 basic health units. The private sector is also large, comprising both qualified and less-qualified service providers, catering for about 60% of curative consultations.

An integrated national action plan for prevention and control of NCDs was developed in 2003. Significant devolution of power has already taken place, with responsibility for health devolved to provincial and district governments. In mid 2013, the government of Pakistan signed the UN resolution for the global 'Prevention and control of non-communicable diseases'.

The government of the Punjab Health Department has taken the lead in building the public sector capacity for addressing the challenge of NCD control in the province. Initially the provincial health department lacked:

- the organisational set-up with defined strategic priorities and allocated resources, and
- evidence-based and indigenous NCD care implementation products and modalities.

Organisational issues

A preliminary health facility survey was conducted on NCD case management arrangements and practices. The Director General Health Services (DGHS) Punjab, through a series of informal consultations, prepared a working paper on NCD control in Punjab and arranged for a provincial-level health services manager to be designated as a focal person for the control of NCD and mental health. This focal person then engaged multiple national and international partners who could contribute.

A Provincial Task Force for the Prevention and Control of NCDs and Mental Health, chaired by the DGHS, was formed with a broad representation of stakeholders. The Provincial Task Force, through extensive consultations, identified the priority NCD conditions for the province to focus on during the first few years. The conditions were: hypertension diabetes; chronic lung conditions; and mental health. The Task Force endorsed a technical assistance priority needs document which was used as a tool to share the programme needs and invite contribution from the potential partners for NCD control in the province.

Integrating NCD care in the primary health care of a developing country www.comdis-hsd.leeds.ac.uk

Read more about our NCD research and scale-up work (continued)

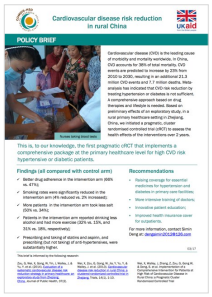
Developing a non-communicable disease (NCD) care package for your country context

This case study shares our experiences of adapting and piloting a NCD care package and train-the-trainer modules in Nigeria. It highlights some of the key considerations for other organisations looking to develop a similar intervention in their own country. Read

Decentralising non-communicable disease care in Swaziland: successes, challenges and recommendations from a pilot study

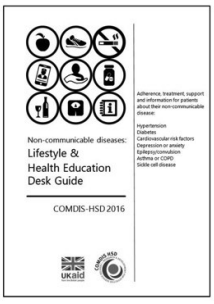
This policy brief shares recommendations from our 2-year pilot study into de-centralising diabetes and hypertension care across Swaziland. Recommendations include allowing nurses to assess uncomplicated patients and revisiting medication contracts to avoid frequent drug stock-outs. Read

Cardiovascular disease risk reduction in rural China – policy recommendations



This policy brief shares our findings and recommendations from our research in Zhejiang province, China. Our study shows that a comprehensive care package at primary healthcare level can lead to better drug adherence, significant reduction in smoking and reduced alcohol and salt intake. Read

Non-communicable disease care package



This package is a suite of practical, user-friendly guides and tools that has been developed in partnership with ministries of health, doctors, nurses and other health workers. It draws on the best current evidence and recommendations for diagnosis, treatment and follow-up care for patients with NCDs in low and middle income countries. All the materials can be adapted for your own country context. See the package

Published studies that have informed this brief

- Walley J, Graham K, Wei X, Kain K and Weston R. (2012) Getting research into practice: primary care management of non-communicable diseases in low- and middle-income countries. Bulletin of the World Health Organization doi.org/10.2471/BLT.12.106674
- Wei X, Zou G, Yin J, Walley J, Zhou B, Yu Y, Tian L, Chen K. (2013) Characteristics of high risk people with cardiovascular disease in Chinese rural areas: clinical indictors, disease patterns and drug treatment. PLOS ONE doi.org/10.1371/journal.pone.0054169
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- Essien O, Otu A, Umoh V, Enang O, Hicks J, Walley J. (2017) Intensive patient education improves glycaemic control in diabetes compared to conventional education: A randomised controlled trial in a Nigerian tertiary care hospital. PLoS ONE doi.org/10.1371/journal.pone.0168835

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1. World Health Organization. (2013) Global action plan for the prevention and control of non-communicable diseases 2013 - 2020
2. World Health Organization. (2014) Global status report on non-communicable diseases 2014
3. World Health Organization. (2013) A global brief on hypertension
4. World Health Organization. Integrated chronic disease prevention and control

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