Guiding Principles for Chronic Disease Management for Vulnerable and Disadvantaged People: Pilot Study Findings

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ABSTRACT

Background: The need for chronic disease self-management (CDS-M) is increasing worldwide. CDS-M programs are variably effective for vulnerable and disadvantaged individuals. **Objectives:** The objects of this study were 1) To explore experiences of health workers leading CDS-M programs for vulnerable and disadvantaged populations, and 2) To develop guiding principles for the delivery of more effective CDS-M programs for vulnerable and disadvantaged populations. **Methods:** Two focus groups were undertaken, with all primary health workers, and allied health (AH) staff in a large community centre in an Australian city, who worked with vulnerable and disadvantaged individuals with chronic disease. **Results:** Consistent messages were identified, producing nine guiding principles. Self-management programs / messages should be tailored to cultural groups, learning styles and available supports, cultural sensitivities, group leadership requirements, language, literacy levels, belief systems and social circumstances and supports, past experiences, and individuals' ability to motivate change. **Implications:** The draft guiding principles may assist others to deliver more effective CDS-M programs for disadvantaged and vulnerable populations.

BACKGROUND

Chronic disease (CD) poses an enormous challenge to Australian health and social systems.[1] CD in Australia now contributes to over 70% of the burden of disease, and is expected to increase to 80% by 2020.[2] In response, the Australian Government has initiated a major focus on CD prevention and management through three complementary policies: the National Chronic Disease Strategy, National Service Improvement Framework, and the Blueprint for Chronic Disease Surveillance.[3] This has been supported by increased government funding for CD self-management (S-M) programs delivered by primary health services across Australia.[4] The priority CDs outlined under the National Service Improvement Framework are asthma, cancer, diabetes, heart disease, stroke and vascular disease, osteoarthritis, rheumatoid arthritis, and osteoporosis.[3]

Despite well established pharmacological methods of management of many chronic diseases, there is no "quick fix."[1,5] It is well established that CD sufferers are best managed when they establish and maintain an optimum health state by addressing their individual CD risk factors. The promotion of CDS-M has stimulated an increasing body of research over the past 15 years, outlining best-practice approaches to increase patient ownership of their health and lifestyle choices. Current research suggests

that patients with good self-management skills make better health and lifestyle decisions and use health professionals' time more effectively and efficiently than patients without these skills.[5,6]

There are a number of formal and informal Australian CDS-M education models. However, the dominant model of CDS-M is the Stanford University School of Medicine Chronic Disease Self-management Program, (the "Stanford model").[4] This is a formal, structured model, developed in America and more recently promoted by the Australian government.[4, 7, 8]

The Stanford model is a group program run for 2.5 hrs per week over a 6-week period, led by trained peer-leaders or health professionals. The program aims to enable "*participants to make informed choices, to adapt new perspectives and generic skills that can be applied to new problems as they arise, to practice new heath behaviours, and to maintain or regain emotional stability.*"[7(pp 13)] CD sufferers are trained to:

    a)   manage frustration, fatigue, pain, and isolation
    b)   understand the benefits of exercise, physical activity, and medications
    c)   communicate effectively with health professionals and friends/family, and
    d)   solve health-related problems.

This pilot study was undertaken to explore anecdotal reports from primary health workers in one large regional community health service in Australia that the Stanford CDS-M model was generally unsuitable for, and ineffective in, many of their clients. Health workers deduced this from lack of client interest in attending established CDS-M programs, high rates of failure to attend the first booked CDS-M session, high subsequent drop-out rates, and consistent negative client feedback.

Many clients in this health region were from vulnerable and disadvantaged groups, including clients with chronic mental health conditions, low intellectual ability, Indigenous Australians, new migrants and refugees from a range of ethnic groups, and unemployed, homeless and/or illiterate people.[9]

Cultural diversity: There is an internationally-recognised need to tailor CDS-M messages for people from ethnic and socially disadvantaged backgrounds to optimise uptake of disease ownership.[10,11] One such program in Australia is the *Living Improvements For Everyone* course, known as the *"LIFE"* course. This program is based on the Stanford model, with modifications making it more culturally appropriate for Aboriginal and Torres Strait Islander populations.[12] Modifications arose from focus groups, observations, and perspectives of patients and health workers, and included:

- changing the name of the course ("LIFE" considered to be more marketable and user-friendly)
- introducing a "grief cycle," as it was identified that many participants were preoccupied with grief, making it hard for them to deal with their chronic condition
- extensive scripting of the course notes to make it easier for leaders to use
- changing the language to improve cultural appropriateness (and eliminate jargon), and
- increased peer leader support.

Over the past 15 years, the Australian population has encompassed an increasingly diverse mix of cultures, languages, and beliefs, incurring congruent and complex influences of pre-migration health, pre-migration nutrition and lifestyle behaviours, literacy, health and wellness expectations, and ownership of lifestyle choices.[13-16] Consequently, effective Australian CDS-M models should reflect the needs and perspectives of culturally-diverse consumers.[17] This paper reports on a pilot study which aimed to draft guiding principles to assist health workers to conduct more effective CDS-M programs for vulnerable and disadvantaged people. The purpose of publishing these findings is to bring these draft principles to the attention of CDS-M health workers working with other vulnerable and disadvantaged populations, so that CDS-M programs may be appropriately modified to suit the needs of a broader range of clients.

METHODS
Ethics Approval: Ethics approval was provided by the University of South Australia Human Research Ethics Committee.

Study Objectives:
    1)   To explore experiences by health workers involved with CDS-M programs for vulnerable and disadvantaged people
    2)   To develop guiding principles to assist in the delivery of effective CDS-M programs for these people
Participants: Primary health workers and allied health (AH) clinicians in a large community centre in an Australian city who worked with vulnerable and disadvantaged people with CD.

Data collection: Two, one hour-long, focus groups were held. Participants self-selected into separate groups of primary / community health workers and allied health providers. The focus groups were recorded (later transcribed), and written notes were made by two independent observers. One researcher asked similar questions for both groups.

Broad focus group questions*:*
- Tell me about what has happened in your chronic condition self management programs?
- Have you had different experiences with people of different ethnic or socio-economic backgrounds?
- Would you have presented the program differently if you knew what you know now?
- How could you determine the stage of readiness to change behaviours of the individuals in your class?
- What were the cultural issues presented to you regarding stages of behaviour change?
- Can the Stanford model be adapted to suit cultural needs?

The questions acknowledged the use of five of the six dimensions of the Trans-theoretical Stages of Behaviour Change model by health service providers when classifying clients, prior to enrolling them in training for CDS-M within the context of the Stanford model.[18,19] The first five dimensions are generally used (excluding the *Termination* dimension). The Trans-theoretical Stages of Behaviour Change have recently been challenged by publications exploring the psychological constructs of behaviour change. [20] However as the model underpinned the CD management approach in this health service region, it was used for this analysis.[18,19] Gambling and Long outline the key elements of the Trans-theoretical Stages of Behaviour Change as:
1. *Pre-contemplation*: No intention to take action within the next 6 months, aims to move the person by subtle consciousness-raising to think about behavioural change.
2. *Contemplation*: Intends to take action within next 6 months. Key processes of consciousness-raising and dramatic relief. Aims to shift the balance of factors in favour (pros) and against (cons) in adopting the beneficial behaviour.
3. *Preparation*: Intends to take action within the next 30 days and has taken some behavioural steps in this direction.
4. *Action*: Has changed behaviour for less than 6 months.
5. *Maintenance*: Has changed behaviour for more than 6 months.
6. *Termination*: Overt behaviour will never return and there is complete confidence that the patient can cope without fear of relapse. No remaining need for the educational support/intervention. [21] (*pp 119*)

Data analysis*:* The researchers examined the observer notes and focus group transcripts for ideas and then themes. There were a number of linked ideas within each key theme, and some ideas that overlapped themes. The themes were then considered within the two overarching frameworks, the trans-theoretical stages of behaviour change, and the Stanford model session aims.[7,18,19]

Data validation: Credibility of the data was established by:
- comparing and contrasting the findings of the focus groups
- independent reflection by the researchers on the themes and their meanings in the context of the focus group discussions
- member checking, by distributing the themes to the focus group participants for checking and modification, and
- reflection on, and modification of, the linkages established between the stages of behaviour change, the Stanford model and the focus group themes.

RESULTS
Participants*:* Eight health workers participated (five primary health/ community workers [group 1] and three allied health practitioners [podiatrist, physiotherapist, social worker, group 2]).

Data extraction and validation: There was good agreement between the researchers regarding the ideas and themes identified from the observer notes and transcripts. There was unanimous agreement from the focus group participants that the discussion had been appropriately captured in the thematic summaries.

Idea overlap*:* The ideas raised in the first focus group differed from those raised in the second, and there was only a small amount of overlap of ideas. The ideas raised in the focus groups ranged across all five stages of behaviour change, with the primary health workers' observations clustering around the first three stages of behaviour change (*pre-contemplation, contemplation*, *preparation)*, and the allied health professionals' observations clustering around stages three, four and five (*preparation, action, maintenance*). Thus overlap of observations and understandings occurred only for clients who were in *preparation* stage (ready to change). The combined findings of the two groups thus provided a composite picture of health workers' experiences with vulnerable and disadvantaged clients with established or pre-morbid CD. The focus groups highlights the health workers' comprehensive understanding of their clients' needs, their readiness to change, and why their clients often failed to succeed with the Stanford model.

Key themes: The key themes encompassed chronic disease definition, goal setting and motivating change; seeking health assistance; recognising and respectfully addressing clients' backgrounds, needs and expectations; attributes of a leader, and leading a group effectively.

There was considerable discussion defining and exploring what was known about CD from the perspective of vulnerable and disadvantaged clients. Focus group participants identified that CD means different things to different social and cultural groups. The health workers reflected that many clients in these groups had no understanding of CD or illness prevention. They noted that for indigenous, migrant, and many socioeconomically disadvantaged groups, the term "*chronic disease*" was more than health, and its interpretation reflected individuals' gender and age, their culture, past experiences, expectations, beliefs, and current environment. The participants' experiences of working with vulnerable and disadvantaged clients highlighted clients' varied perspectives of health, for instance defining health (*What is healthy?*), expecting health to deteriorate with age (*Isn't poor health inevitable?*) and the need to change behaviours *(Why change? Is there a problem?).*

Participants indicated that men and women can have different belief systems, as well as different opportunities, capacities, and incentives to improve their health, and the health of their family. Children and young people were often perceived to be in conflict with their families regarding health messages and healthy behaviours, as they had to assimilate peer influences outside the home and mediate influences from their parents' beliefs and behaviours. In particular for young people recently arrived in Australia, this produced conflicts which they were often unable to resolve appropriately. When older family members could not provide appropriate guidance (perhaps because they had never encountered issues such as alcohol or drug abuse), young people had no reference point, lost respect for their elders, and dismissed their cultural values, heritage, and teachings.

Particularly for migrants, their cultural norms and the way things were *"back home"* significantly impacted on their current health behaviours, which could be either drivers or barriers for change. Participants highlighted the importance of recognising and defining CD in light of clients' past experiences and in the context of their broader community, social, economic, and environmental health concerns. A concept raised in both focus groups was some migrant parents' beliefs that a "*big child'''* (overweight) was an example that the parents were "*doing well'* and were able to provide adequately for the family (*underweight = poverty*). Participants provided numerous examples of parents providing children with unhealthy food and supporting unhealthy food choices, because such food choices were freely advertised. They believed that media advertising was *"Australian,"* and they wanted their children to be seen to be as "*Australian*" and not be different. Examples were provided, such as encouraging children to eat well-known fast-food chain products daily, or sending children to school with lunch that consisted only of a packet of *"Australian"* biscuits. Many migrant clients came from countries where media and advertising had been strictly controlled by Government. They thus believed that if foods were advertised in Australia, they must be Government-supported or approved, and thus "*good for you" (advertised = approved, healthy).* Previous experience of poverty, or having lived in situations where food was controlled and scarce (such as refugee camps), put a different perspective on food availability and eating for many migrant families.

"If I am hungry I eat"
"I am happy to see my children eating and getting fat"
"I want my children never to be hungry or thin"

While *living in Australia* was perceived to be a desirable and valued state for many of the clients in the region, the issues of "*being Australian"* were two-edged. Being in Australia meant a free thinking, non-regulated environment, which provided little guidance regarding right and wrong social choices. It often meant that families had to contend with different values and society norms, and had to leave behind their own cultures to embrace "*Australianism*." This created conflict between old and new ways of life, and introduced issues of language and idiom. The positives and negatives of social marketing (e.g. TV advertising) were highlighted.

These issues around the broader understanding of chronic conditions and the influences of culture and past experiences on managing health were highlighted by Warren et al. in their research and development of the LIFE course.[12] These issues were practically addressed in the LIFE course by creating a name for the course that had meaning, and modifying the model to incorporate cultural issues that influenced clients' ability to manage their chronic condition.[12]

Goals were reported to mean different things to different clients. Moreover, focus group participants indicated that goals may not mean anything to some clients. This was perhaps the key element of why many clients in this region did not succeed with the Stanford Model. Goals and the capacity to goal set were perceived by the focus group participants as a "*middle class, Western'''* construct. They recalled stories told to them by their clients about their past experiences of living day by day in war zones, not having enough money to get through a day, not knowing whether they would be sleeping in the same place two nights in a row, and eating what they could find. *"How can someone set a goal to walk around the block every day if they are afraid to go out of their house?"* *"Many women struggle to get their husbands to give them permission to go shopping by themselves because of*

their husbands' cultural norms and expectations, and their own fear." Clients in Australia living on unemployment or sickness benefits also found it difficult to plan more than one to two days ahead. *"They often don't know whether their money will last through until next payday, so they find it difficult to plan ahead."* The capacity to goal set, work towards goals, and have lasting behavioral changes was identified by the participants as being influenced by more than the individual, including social determinants of health, such as housing, money, transport, safety and food.

A consistent theme was the provision of effective disease management (or *good health*) messages within the context of clients' broader environments, not just their health status. In order to assist clients with chronic disease to make sustainable good health decisions, they needed to be seen as individuals living in a family, in a house, on a street, in a community, and contributing to many others around them. Focus group participants highlighted that many factors increased poor health and worsened chronic diseases, including housing, finances, transport, cultural expectations and pressures, family dynamics, capacity/ willingness of individuals to be empowered, gender roles and expectations, and education levels. Thus any health message provided to vulnerable or disadvantaged clients needed to take account of the person within their context, and be tailored to their needs.[22,23]

The focus group participants highlighted the need to recognize that their clients were also likely to be caring and/or providing for others, may be living in poor housing with inadequate facilities, may have an inadequate family income which was spent on others in the family who did not have an income (extended family without their own means of financial support), may have limited transport options, limited literacy or education, may be living in an unsafe location or socioeconomically depressed community, and may be working in unsafe environments, or engaged in illegal activities. Thus many clients lacked the capacity, will, insights and/or energy to motivate change in an environment that was unlikely to change, or be changed without significant effort. Participants noted that the family, the family environment, and the local community need to be ready to change at the same time as the individual is making changes, in order to sustain individual changes in health behaviours. Illiteracy and poor English skills, domestic violence, unemployment, lack of disposable income, disability, inadequate housing, poor clothing, inadequate heating or cooling, and inappropriate or inadequate food were all issues that needed to be considered when identifying the most appropriate way to change health behaviours and address chronic disease in vulnerable individuals.

This complex interplay between the social determinants of health and their influences on an individual's ability to effect change and adopt chronic condition self-management principles emphasizes the need for chronic condition interventions to look beyond the simple behavioral management approaches, like goal setting, to a broader social determinants approach. [22,23]

A key theme, explored in depth, was *engaging clients in good health behaviours*. This particularly reflected the need to recognize clients in the pre-contemplation and contemplation stages of behaviour change. Clients needed to be considered with respect to their culture, health, and social needs, as well as the factors that could motivate them to attend a health-focused group setting. Inviting clients to attend groups reflecting cultural diversity or cultural similarities posed an ongoing tension for primary health care workers. This had been addressed by assembling groups for different purposes, such as like-cultural groups for teaching traditional skills, or groups which had a common bond, such as mothers and babies. Different cultures required different approaches and these required experienced peer leadership to understand what worked and what didn't work. Recognising and celebrating cultural approaches to health and remedies was raised, although this was considered to be another two-edged situation. Culturally accepted diagnoses, prognoses, or remedies may be inaccurate and unsafe, and may cause harm if promoted in health messages. However, there were many undeniable truths across cultures particularly related to eating healthy foods appropriate to ethnic genetics and food tolerances, exercise patterns, and social structures which could enhance wellness messages. Highly developed group leadership skills were needed to thread accurate health messages into group discussions while remaining respectful of cultural beliefs and sensitivities.

An important message that threaded through the focus groups findings was the value of *shared group experiences*. Bringing people together to share stories and learn from each other was raised in many ways during discussion. Groups should be fun, and clients should want to attend each meeting rather than being expected to attend. Using established groups or structures, and using non-health-related opportunities appeared to work far better in retaining clients' interest and commitment than illness-focused groups. Expectant mothers' (parents) groups, mothers and babies groups, sewing and cooking groups, shopping groups, young adults' social groups and men's sports groups were cited as opportunities to bring people together to share stories which could be given a "*wellness,*" "*risk minimization,*" or *"good health focus"* by an experienced facilitator. Peers who had made significant health changes were often successful as *"role models"* and *"peer leaders,"* particularly if they were able to identify with the barriers faced by others in the group when making similar changes. Groups which focused on *experiences* and *good health*, not disease, were more successful, as were groups whose knowledge built on established strengths and skills. Groups in which different methods of communication were used (such as written, conversation, dance, visuals) were more effective than lectures, as were groups which celebrated and embraced social, emotional and cultural intelligence.

Many suggestions were provided for conducting successful groups in which good health messages were disseminated. The right message needed to be delivered at the right time, although this was often difficult to determine. The content of health messages

needed to be appropriate to every individual in the group, within the context of the group structure and purpose. The style of delivery needed to reflect group attendees' preferred options for learning, and needed to use appropriate language that suited literacy levels and group purpose. Health messages could be delivered covertly or overtly, and there needed to be group ownership of the learning outcomes. Ongoing supports were often required, as individuals may not be ready, or in a position, to adopt behaviour changes at the time they hear the message. Thus simple homework, take home messages, and learning aids such as diaries, picture books, stickers, or reminders were valued. Long term self-management opportunities needed to be available for all participants of CDS-M programs, such as access to facilities, peers, health workers, or learning materials, in order to ensure that once clients had commenced making changes to behaviour, they could maintain these changes readily. Some clients needed 1:1 interaction as well as group interactions to assist them to make healthy behaviour decisions. It was suggested that the place of delivery was often key to assisting clients to change health behaviours, as some may be reluctant to attend a health care setting, yet may be open to being visited at home or attending a neutral non-health community location. This flexible approach to chronic condition self-management has been recognized in the literature as one of the essential factors to advancing self-management in Australia.[12]

A marker of success of group health interventions was considered to be the willingness of group members to continue to meet without the impetus of a CDS-M program. This was often seen in mothers' and babies' groups, whose members continued to meet socially, or exercise groups that continued with walking or other exercise without requiring a facilitator.

Group leaders had a pivotal role to play in ensuring that groups came together, stayed together, had fun and learned something. Participants consistently identified that facilitators needed to be credible and experienced. They should understand and manage group dynamics and be culturally sensitive (same culture as group members or with demonstrable awareness of cultural needs). They needed to have an understanding of languages other than English to enable involvement of language-challenged individuals and the capacity to communicate using acceptable idioms / phrases recognisable by all participants. Being non-judgmental and fun, yet respectful of the individual's and the group's boundaries and limitations was essential. Good facilitators did not impose their own views and overtly valued all individuals in the group and allowed them to be heard. It was essential that the facilitator establish and maintain group cohesion, celebrate teachings and learnings within the group, and empathise with group experiences. They need to be able to actively support, and be involved in, clients' change processes, and appropriately challenge and engage in debate about different beliefs and interpretations of health / social messages. Where considered important to assist in disseminating health messages, more than one person should be involved in facilitating a group, for instance, where health workers from multidisciplinary backgrounds could come together to address a range of group needs within the context of the group purpose.

The importance of good group leadership was acknowledged by the LIFE course with increased support of the facilitator and a concerted effort to recruit course participants as leader once they had finished the program.

Good facilitators should involve clients in determining what groups will achieve in the short and long term and how the group sessions are structured and run. Session content, goals, outcomes and organisation need to be a group decision, facilitated by the leader. The facilitator needs to have the skills to change group structures / roles / goals as required and to support the group to follow its own path within a self-management framework.

CORE LEARNINGS
Despite the ideas and themes being derived from a small number of focus group participants, they appeared comprehensive, empowering, and similar to the way in which CDS-M programs, such the LIFE program, were developed.[12] Thus these ideas appear to offer a way forward for health workers seeking to improve the acceptability and effectiveness of CDS-M programs for CD sufferers with specific-needs.

Capacity to change behaviours: Focus groups participants highlighted the importance of recognizing clients in their stage of readiness to change behaviours before enrolling them into a CDS-M program. Many clients never moved past non-health group attendances, preferring to attend mothers' and babies' groups or sewing groups rather than attending more health-focused groups such as "healthy eating" or "healthy exercise" programs. The participants highlighted the need to respect the client's wishes in providing them with supports to manage their health in their own way.

Capacity to change may not be obvious, and only indirectly measurable, such as clients deciding to walk to CDS-M sessions, rather than driving or catching public transportation, providing children with healthier school lunches, managing their grocery budget better, choosing healthier foods to share in the group, or bringing a new group members along with similar health concerns.

Stanford model: Participants indicated a mismatch between the Stanford CDS-M approach and effective CDS-M initiatives for vulnerable clients, clients from different cultures, and clients who were illiterate and socially disadvantaged. The aims of the

Stanford model broadly address managing frustration, fatigue, pain and isolation, establishing the benefits of exercise and physical activity, understanding medications, communicating effectively with health professionals and friends/family and solving health related problems. For many of the clients whose views and experiences were expressed by the focus group participants, frustration and isolation was part of who they were. These were reflections of their previous experiences, their culture, where they live (lived), their family dynamics, their finances, and their mental, physical, and social health. Their clients may not have had the opportunity or incentive to undertake regular exercise, and family responsibilities may have limited the ability to focus on their own health or to undertake overtly health-related activities. Clients may be illiterate, have low health literacy, and minimal opportunity, incentive, or confidence to communicate with health professionals or even their family about their health. Thus, obtaining correct medications in adequate supply and understanding how medications work and how to use them effectively may be an insurmountable task for some. The language of health used in CDS-M programs, such as the Stanford model which has an American basis, may not resonate well with them and their concepts of health as new and/or disadvantaged Australians may not fit within a Western, middle class CDS-M model.

The focus groups confirmed that a "*one size fits all'* model of CDS-M may be inappropriate for individuals with different cultural backgrounds, who have different social and family needs, and who may not place high priority on their own health especially where more debilitating impacts may be evident only in the longer term. This highlights the need for a flexible and responsive approach to CDS-M program development.

The effectiveness of CDS-M interventions may be best measured by a focus on process outcomes such as regular group attendance, completion of scheduled group sessions, overt and willing participation in group activities, willingness to attend more group sessions, willingness to maintain contact with group members when the sessions are finished, and referral of others to sessions or services. These outcomes may be more realistic and measurable during pre-contemplation and contemplation stages than impact outcomes such as goal attainment, action plan achievement or behaviour and attitude change.[23]

RECOMMENDATIONS AND CONCLUSIONS
Nine draft guiding principles were distilled from the focus group findings. These may be useful for health workers in other settings who are working with vulnerable and disadvantaged clients with a disappointing level of engagement in formal CDS-M programs.
1. Engage clients in the most appropriate forum for them, by developing effective networks to increase community awareness and access to relevant CDS-M programs and information.
2. Use existing broader activity and program structures to engage specific groups of clients.
3. Engage appropriately skilled facilitators who understand the cultural sensitivities and are able to communicate effectively with the groups.
4. Adapt CDS-M program content and structure to meet the needs of each client group.
5. Structure CDS-M education strategies to celebrate and encourage shared client stories and experiences, which may not have an overt focus on illness or health.
6. Focus on health rather than illness - health as part of an individual, reflecting client culture, family, living environment, community, and capacity to make healthy behaviour choices.
7. Maintain regular contact with clients at the pre-contemplation and contemplation stages to enable them to access appropriate supports, health workers, and services *when the time is right for them*.
8. Accept that not all group participants wish to change health behaviours; therefore, focus on what individuals can and want to do and what they are able to change.
9. Ensure program evaluation acknowledges and captures changes at all levels of behaviour change, including pre-contemplation and contemplation levels.

These draft guiding principles are sufficiently broad to be applicable to a range of vulnerable and disadvantaged clients. These principles celebrate the individuality of clients with CD, and should assist health workers to identify more acceptable and effective strategies when introducing better health messages. Unless clients' backgrounds, perspectives, and needs are recognised and addressed, involvement in a general group "one-size-fits-all" program may misuse scant health resources and have a detrimental effect on the future health of the individual for whom the program has failed. These draft principles require ongoing research in different vulnerable and disadvantaged populations to establish their acceptability and effectiveness in improving client engagement in CDS-M programs, to describe how they were operationalised for different client groups, and to determine whether they improved long-term health outcomes better than formal programs such as the Stanford CDS-M model.

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