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EXECUTIVE SUMMARY

The objective of this report is to provide an overview of the evaluation findings from the GC_1000 project, involving seven countries: Belgium, Ghana, the Netherlands, Kosovo, Suriname, South Africa, and the United Kingdom. A realist evaluation design was used to synthesise findings from data gathered and analysed at each stage of the programme, through from the situational analysis and adaptation plans, the implementation process, fidelity and experience and impact. Using mixed methods, the evaluation examines these different dimensions from a range of perspectives, to explore and understand how group care, as a complex, person-centred intervention was implemented and experienced in these diverse settings. We report on the barriers and facilitators experienced, the ways in which group care was adapted and provided in each country, and the experiences of both providers and care participants. Analysis of contextual influences was guided by the Consolidated Framework for Implementation Research; fidelity was examined with reference to two published conceptual models for group care and experiences were mapped onto a framework of mechanisms of effect derived from the literature to illuminate how group care achieves beneficial outcomes and to understand whether these mechanisms were found across all country contexts. Finally, the costs of providing group care in each country were calculated and their implications for scale-up and sustainability were considered. The strengths and limitations of this evaluation are discussed and the findings considered in the light of the wider published literature. Indications for further research and development are also provided.

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Abbv	Participant Organization Name	Country
TNO	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	Netherlands
LUMC	ACADEMISCH ZIEKENHUIS LEIDEN	Netherlands
VUB	VRIJE UNIVERSITEIT BRUSSEL	Belgium
GCG	GROUP CARE GLOBAL	United States
CITY	CITY UNIVERSITY OF LONDON	United Kingdom
UCT	UNIVERSITY OF CAPE TOWN	South Africa
AMC	AKCIONI PER NENA DHE FEMIJE	Kosovo
PERISUR	STICHTING PERISUR	Suriname
PHS	PRESBYTERIAN CHURCH OF GHANA	Ghana
SIMAVI	STICHTING SIMAVI	Netherlands

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CHAPTER 1 - INTRODUCTION

1.1 Purpose and Scope

Group Care in the First Thousand Days (GC_1000) was funded by the European Union's Horizon 2020 programme with sites in Ghana, South Africa, Suriname, Kosovo, Belgium, UK and the Netherlands. The overall aim is to co-create and disseminate evidence-based implementation strategies and tools to support the implementation and scale-up of group care in health systems in both high-income and low/medium-income countries, with particular attention to the needs of vulnerable populations.

The evaluation aims, therefore, were to understand the implementation context and process, how group care worked in each context, the uptake and experience of group care and the mechanisms through which outcomes of this model of care are produced, in order to inform and deepen understanding of the model, identify lessons learnt and to support the blueprint and toolkit development. This evaluation report describes the process and findings in Ghana, South Africa, Suriname, Kosovo, Belgium, UK (England) and the Netherlands.

Evaluation Objectives:

- To understand how context influences implementation in the case study sites, including fidelity of the model
- To explore the experiences of maternity services and care providers using the group care model of care
- To explore the experiences of women, families and communities and the potential benefits (or unintended consequences) in different health system, socio-economic and cultural contexts
- To draw out wider lessons for implementation and integration across a range of national and local settings
- To collect data to underpin the economic analysis of cost implications of implementing Group Care

This document describes the design, methods and findings of the evaluation of the implementation process in each participant country, its fidelity, experiences of providing and receiving care and the factors influencing these. The evaluation also aims to understand the mechanisms by which group care achieves positive outcomes, and whether these are applicable in the different implementation contexts. The report will also cover the economic analysis of cost implications of implementing and delivering care in each of the participant countries, and a summary of implications of the evaluation for embedding the model in standard practice, scaling up and sustaining the approach. The evaluation

examines to what extent the intended benefits, anticipated from existing evidence, are achieved in each setting and explores any unintended consequences, whether positive or negative.

1.2 References to other GC_1000 Documents

- GC_1000 Description of Work (Proposal)
- D5.1 Research Protocol WP5
- D2.1 RQI Protocol WP2
- D2.2 RQI report WP2
- D3.1 Adaptations report WP3

1.3 Definitions, Abbreviations and Acronyms

Table 1 List of Abbreviations and Acronyms

Abbreviation/ Acronym	DEFINITION
ANC	Antenatal Care
ANQ	Antenatal questionnaire
CFIR	Consolidated Framework for Implementation Research
FGD	Focus group discussion
GANC	Group antenatal care
GC	Group care
GP	General Practitioner (family doctor)
HV	Health Visitor
INT	Interviewer
MW	Midwife
NHS	National Health Service
PNQ	Postnatal questionnaire
PRES	Pregnancy Related Empowerment Scale
RQI	Rapid Qualitative Enquiry (Inquiry)

CHAPTER 2 - DESIGN AND METHODS

2.1 Design

The GC_1000 programme evaluation used an interpretive case study design, with mixed methods data collection within a Realist Evaluation framework to examine the intervention as adapted and implemented in each country context (Martens et al. 2022). Realist evaluation is an approach suitable for understanding the implementation of complex care models where outcomes are contingent on both context and the implementation process. Realist evaluation methodology enables researchers to ask, "What works, for whom, in what circumstances and why?" (Cheyne et al. 2013).

Realist evaluation has an explanatory focus that aims to understand how the implementation of programmes is shaped, enabled, and constrained by the interaction between programme elements (e.g. organisational changes or interventions) and mechanisms of effect in a diverse range of contexts. The methodology pays attention first to process – to gain a full and critical understanding of the context and challenges of implementation, the barriers and facilitators to it and the solutions adopted. Through observing how a programme unfolds in practice when introduced into a range of contexts, realist evaluation seeks to describe the ways in which an intervention or model of care works in different contexts and to identify the mechanisms through which various outcomes (planned or unplanned, positive or otherwise) are achieved.

The evaluation approach for GC_1000 therefore drew together findings of the various work packages to provide an overall picture, as illustrated in Figure 1.

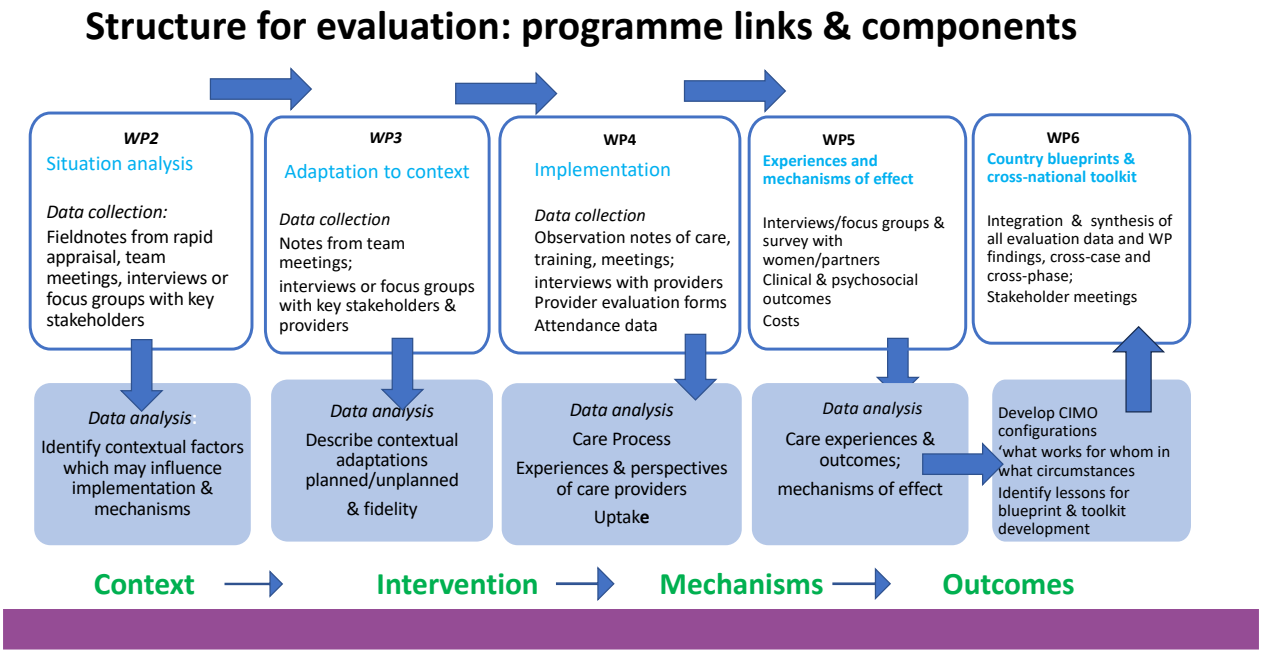

Figure 1. GC_1000 work packages integration in the Realist Evaluation Design

2.2 Methods

In each participant country, the evaluation used mixed methods of data collected at all stages of the project, starting with situational analysis (WP2, using Rapid Qualitative Enquiry - RQI) and the development of adaptation and implementation strategies for group care (WPs 3-4) and observing the implementation experience (WPs 4-5). The findings from each stage were analysed and synthesised across data sources to formulate hypotheses for what intervention and implementation strategies may work, for whom, how, and in what circumstances. Following in-country analysis, finFdings were collated and synthesized to draw out understandings of how the implementation process functioned across the different national as well as local settings and to understand patterns of similarity variation to draw out more general implications.

Qualitative data collection was mainly focused on understanding the implementation process in each setting and how this approach to care is experienced by the health care providers who facilitate the care, the women who receive the care, and women's partners and families. Methods included individual interviews or focus groups with relevant stakeholders, service providers and service users, as well as observations of implementation planning, training of facilitators and the group care sessions themselves (see Table 2.1).

In addition, two or three stakeholder workshops were held in each country as part of WP6 to discuss findings on implementation process, achievements, challenges, opportunities and content for country implementation blueprints to support sustainability and scale up (see D6.2 for full details).

Quantitative methods were focused on understanding the impact on care attendance and engagement, psychosocial and physiological wellbeing and costs of providing care. Methods include self-evaluation forms maintained by providers, which also recorded attendance and cost data, a late-pregnancy and postnatal survey of women and analysis of routine data, where available, to identify costs and outcomes of care. Estimates of costs and effects were also obtained through interviews with relevant stakeholders. Where feasible, data were collected for a control group of comparable women receiving standard care, or a pre-implementation control sample. However, this was not always feasible since the care may be offered to specific population groups, such as migrant women, for whom no suitable comparison group was available.

Using these data, and existing costs and outcomes evidence sources where relevant primary data were not available, an exploratory economic evaluation was performed in which costs of group care were calculated and where feasible compared to usual care.

Further details of methods and tools used are provided in Appendix 1.

Sampling

Sampling was purposive, designed to include participants with relevant experiences and insights to inform the analyses, also taking into account the need to ensure diversity of participants. Diversity was sought in terms of role and perspective in relation to group care (such as decision-makers, those facilitating care and those receiving care) and in terms of engaging with group care participants from different socio-economic or ethnic backgrounds and previous experiences of maternity care. Sample size overall was determined by the available relevant populations (participants, providers and stakeholders) for each setting within the study period and by the principle of information power (Malterud and Siersma 2015), which is focused on including the participants most relevant to enable understanding of the issues being explored. It was estimated that up to 144 women in each country

would participate in group care. Pseudonyms are provided where participant names or health care sites are mentioned.

Estimated planned samples for each country were as follows:

Qualitative:

- Planning and implementation meetings – up to 3 (virtual or in person) meetings observed; all available meeting notes reviewed
- Training and preparation activities –at least 1 workshop or training session observed per setting (if training by site)
- Key stakeholders – up to ten individual initial interviews (RQI conducted in WP2) and 3 follow-up interviews
- Facilitators (midwives/other HCPs)– up to 12, participating in at least 1 focus group discussion, or individual interviews
- Women (and partners/family members where present) – 3 focus groups in each setting
- Group antenatal and postnatal/parenting care – up to 3 observations per group, up to 2 groups per setting

Quantitative:

- Attendance data – records maintained by care providers for all groups, for each ante- and postnatal or parenting session
- Cost data – all professionals were asked to log time and resources required to facilitate each group session using the facilitator self-evaluation form
- Survey of women – all women participating in the group care were invited to complete questionnaires in late pregnancy and postnatally; a control group of women receiving standard care were also surveyed using the same process where feasible and appropriate (e.g pre-implementation in same setting or a comparable group of clients in same setting not offered group care)
- Outcomes data – depending on availability of routine data sources in each country, anonymised outcomes data were obtained for the most relevant comparator population, nationally, regionally or at service level. Some self-reported outcomes data were included in the survey of participants. Outcomes collected where available included breastfeeding initiation and continuation, mode of birth, gestational age and weight at birth and admission to neonatal care.

Data analysis

Qualitative data:

Step 1) The Framework Method was used to code the data and identify themes (Gale et al. 2013). An initial sample of data across all participant countries was analysed inductively by City researchers applying open coding and thematic analysis to identify candidate themes. This formed a framework with remaining data coded in relation to this by in-country researchers, adding newly identified themes where needed.

Step 2) Depending on the data type and purpose, these were then mapped onto bespoke frameworks based on prior literature to analyse fidelity, and mechanisms of care.

Step 3) To synthesise understanding of influences on implementation, themes identified across the different data sources were mapped to the relevant domains of the Consolidated Framework for Implementation Research (CFIR). Any themes which did not fit the CFIR framework were noted, and the framework adjusted if appropriate.

The core CFIR components are:

- The intervention
- The outer setting (macro context such as health system, policy, country and regional characteristics, socio-economic status
- The inner setting (meso-level context such as regional and local healthcare services, professional mix, community characteristics)
- The individuals involved (those providing and using the maternity service)
- Implementation process (how the implementation is approached and responses to this)

Quantitative Data

Quantitative data from facilitator self-evaluation forms, women's surveys and routine costs and outcomes records where available were imported into bespoke Excel files and analysed descriptively. The findings were then considered in the light of existing research findings focused on clinical and economic outcomes using experimental or cohort study designs.

Synthesis

Data analyses from all sources were then integrated through realist synthesis to develop Context, Intervention, Mechanism, Outcome configurations exploring what works (and how) for whom, in what circumstances.

Table 2.1 Summary of data collection methods, planned and obtained samples

Method	Process component	Sample obtained by country
Observation and meeting notes	Implementation meetings; planning preparation and training sessions	UK – all steering group meeting notes (approx. monthly meetings in each site); 3 training sessions observed + facilitator reflections and participant evaluation forms. SA – Basic field notes from multiple meetings with managers (approximately 10 meetings) with the site to obtain buy-in for the project, to discuss planning for implementation and meetings to discuss ethical requirements for the research project. 3 training sessions observed. BE – observation of 3 workshops NL – 2 observations of two-day training sessions, 10 observations of group care sessions, notes of the country team meetings, notes of the stakeholder meetings, SR – observation of 7 workshops GH – 1 training observation + follow-up focus group with the midwives; reviewed notes of 1 planning meeting KS – observation of monthly implementation meetings, observation of 1 steering committee meeting on GC_1000 implementation, observations of two training sessions
Semi-structured interviews with key stakeholders	Those involved with decision-making and facilitation of implementation, conducted face-to-face or online	UK – RQI 19 & 6 follow-up interviews (6 planned – still in process) SA – 15 interviews with pregnant women, 3 interviews with male partners, 12 interviews with key stakeholders. BE- 12 NL – RQI interviews with 1 policy maker antenatal care, 3 postnatal stakeholders, 3 country stakeholders SR –64 interviews with stakeholders & 1 focus group with group care recipients GH -RQI 84 interviews conducted with health service managers, providers and users and community and opinion leaders KS - 20 RQI interviews (stakeholders, management, health professionals & women of implementing sites)
Interviews/focus groups with providers	Focus groups or interviews following an observed sample of care sessions with those facilitating group care.	UK – Site 1: 5 interviews (3 MWs 2 HV); Site 2: 1 FGD with 7 midwives. Total 12 SA – 1 focus group with midwives, 1 manager interview, joined several reflection sessions with midwives after hosting the groups to gain insights from them about their experiences (captured in self-evaluation forms) BE- 1 focus group per setting: 3 in total NL – 16 midwives across 5 sites and 3 child health professionals 1 site (RQI); 10 midwives in 2 FGDs & 1 individual interview (antenatal); 2 child health professionals (postnatal) SUR –6 midwives facilitating (4 in primary and 2 in secondary care and 6 midwives not facilitating group care, who had received group care training. 3 interviews with senior professionals involved indirectly in the implementation GH -6 FGDs and 3 in-depth interviews KS – 3 FGDs
Interviews/focus groups with group care participants	Focus groups or interviews following an observed sample of care sessions with those participating in group care	UK – Site 1:3FGDs & 5 interviews (n=15); Site 2: 4 FGDs & 6 interviews (25). Total 40 SA – 5 focus groups + 2 individual interviews BE- 6 in-depth interviews NL – 5 individual interviews antenatal & 9 postnatal SR – 2 FGDs with 7 antenatal group participants, purposively sampled across groups

		GH -3 FGDs with women participants KS – 4 FGDs
Observations of care process	Group care and (if possible) traditional care in each implementation setting	UK – Site 1: 11 sessions across 4 groups; Site 2 6 sessions across 3 groups. Total 17 SA – 25, across 6 cohorts BE- 6 antenatal and 2 postnatal NL – 10 notes & fidelity forms antenatal, 5 notes & observation forms postnatal SR –12: 5 antenatal & 7 postnatal sessions, selected randomly GH - 6 groups observed, and fidelity forms completed for each KS – 7 ANC + 1 postnatal Site 2; 2 ANC Site 3
Group facilitator self-evaluation template and attendance record	Self-evaluation template filled out by facilitators	UK – 56 Facilitator forms completed and attendance records checked for all women where a form was missing SA – 25 forms completed BE - 84 forms completed NL – 92 forms completed antenatal & 23 forms completed postnatal SR – 76 in total. 38 for antenatal & 38 for postnatal sessions GH -135 available KS - 40 forms completed (all sessions)
Survey of women receiving group care	All women who receive group care, in late pregnancy and postnatally; control group of those receiving standard care in same setting where feasible.	UK – ANQ 80 and PNQ 75 returned of total sample of 166 women. SA – ANQ 22 and PNQ 15 BE - ANQ 35 and PNQ 26 – 71 in total NL – ANQ 59 and PNQ 33 SR – ANQ 28 and PNQ 18 GH -ANQ 87, PNQ 73 (72 who completed both plus one postnatal survey response only) KS ANQ & PNQ: 25/27 in group care and 55 controls (all women receiving standard care in same period invited to respond),
Routine or prospectively collected data relating to care costs and outcomes	Care outcome indicators; for women receiving group care and standard care. Costs of service: staff salary, materials and other relevant costs	UK – clinical interventions & outcomes; routine care costs for all participants; national reference data SA – costs data collected; live births and antenatal care attendance BE - costs data collected NL – outcomes and costs available from recent studies on antenatal group care in the Netherlands SR – outcomes for GANC and routine care costs GH –costs data collected; clinical data from survey respondents only KS - costs data collected; clinical data from survey respondents only

Note: The Netherlands participated with 5 midwife practices: data was collected in two of the midwife practices. Qualitative data were collected across all the midwifery practices and the asylum seeking centres which implemented group care (see table 4.2 for summary of site across all countries).

CHAPTER 3 - THE IMPLEMENTATION CONTEXT

This chapter draws primarily on the findings of the Rapid Qualitative Enquiry (RQI), which was conducted initially in each country as part of Work Package 2 to inform the implementation process through understanding of the implementation context, any barriers or facilitators and the processes and systems needed to support implementation. The analysis was supplemented by subsequent records and data gathering on the contexts at the local and national levels. This enabled consideration of how contextual influences evolved during the implementation and evaluation period drawing on the local knowledge of the research and development teams and service providers. Follow-up interviews were conducted with key stakeholders in some settings and each country convened stakeholder workshops to discuss the emerging findings and their implications for scaling up and sustaining group care.

In summary, the RQI used a rapid ethnography approach, with analysis informed by the CFIR framework. Locally relevant literature and policy documents were examined, and interviews were conducted with a range of stakeholders (such as decision makers or service leaders who might have an influence on implementation), maternity service providers such as midwives, obstetricians or family doctors (GPs) and service users or service user and advocacy organisation representatives.

The detailed methods of the RQI can be found in (D2.1) and the findings in (D2.2) while the specific data collection for each country can be found in individual country evaluation reports, which will be available from respective country leads on request.

Implementation priorities were consistent across all countries in relation to improving engagement with care and enhancing information, health education and social support for pregnant women and in some settings (Suriname, UK) their partners. Specific priorities varied in relation to country context. In Ghana, a key priority was to improve overall uptake of antenatal care and effectiveness of screening and referral in case of pregnancy complications. Therefore, sites were selected in a rural region in the north of Ghana with low antenatal care coverage and poor maternal health indicators. In South Africa, uptake of antenatal care is reasonably high in the public health system, however there is room for improvement in terms of quality of care and uptake, a key goal of the current maternal health policy is to improve the acceptability of care, quality of care for pregnant women and to promote respectful maternal care. Improving health literacy (for example through promoting healthy eating, reducing smoking) and enhancing social support was also a key priority. This was also a policy priority in Kosovo, particularly for minority communities such as Roma, Ashkali and Egyptian women and it was hoped that group care would help to inform parents and enhance rates of breastfeeding and immunisation. In Belgium, Netherlands and the UK, improving equity of access and outcomes for more

vulnerable women and those from minority ethnic groups was a public health priority, while in the UK national maternity policies prioritised improving care continuity and personalised care because of association with improved experiences and outcomes. In Suriname, addressing the gaps in postnatal care, including maternal health and engagement of fathers in maternity care and improving support for parenting and family wellbeing was prioritised, leading to a strong focus on developing postnatal groups. The team also aimed to reach more vulnerable women/families with group care.

In all settings, it was recognised that maternity care cannot address underlying social determinants of health, but it was considered that group care may help to address consequences by enhancing professional-patient relationships and engagement with care, improving health literacy, social support and both psychological and physiological wellbeing.

In countries with more mixed (Suriname, Kosovo) or social insurance- based financing (Netherlands, Belgium) reimbursement for midwives facilitating groups was a more distinct challenge than in universal systems (UK, Ghana). In Suriname, for example, midwives felt they should receive additional payments to provide group care and midwifery practices in the Netherlands and in Belgium had concerns regarding securing reimbursement of practices for this model of care (in Belgium to provide more midwifery antenatal care) and at a sustainable level. This was particularly the case when facilitating more vulnerable groups or when interpreters would be needed because of the additional time and cost this would entail. There is a mixed private and public sector in South Africa: while midwives are paid via normal salaries in the public health system, the number of available staff is a challenge, and the national health budget is currently operating under austerity with health budgets being cut.

Table 3.1 provides a summary overview of the national maternity system context of each participant country, and any previous experience of group care.

country	National Income	Health system & health finance	Maternity care standard model MW-led?	Previous experience of group care	Other local studies
UK	High	Universal; free access, almost no private maternity care; care typically follows national evidence-based guidelines. Recent severe impact of austerity.	Midwife-led for all low-risk; all routine ANC by midwives who refer to medical collaborative care if assessed as high-risk; most ANC community-based.	Limited except in local area of study; no previous experience of postnatal; CITY has developed bespoke model & training.	Feasibility & qualitative studies; RCT also in process: NIHR funded R&D
Belgium	High	Social insurance-based; centred on independent medical practice offering direct access & choice on a fee-for-service basis, with both public and private institutions providing reimbursed services and adhering to same rules.	Obstetrician led antenatal & birth care, less than 1% gives birth with a midwife. No formal midwife-led care. If women choose midwife care they are expected to have a minimum 3 obstetrician appointments for ultrasound.	Group Care in Brussels started up since 2020, in 3 settings. In Flanders Group Care was piloted in 2 settings, without findings or research.	Little information was yet available, therefore GC_1000 adds to knowledge covering more regions.
Netherlands	High	Social insurance-based free access; low-risk maternity care is primary care-based. Hospital birth is recommended only for those with clinical risk factors.	Midwife-led for all low-risk; independent midwifery practices provide care in community for low-risk or clinical midwives in hospital for higher-risk women.	~10 years; CenteringZorg training & support – 30% of the midwifery practices offer group care but not implemented routinely. Postnatal group care not yet widely implemented but growing.	RCT and Cost evaluation of group care published during study period; qualitative studies
Kosovo	Upper-middle	Emerging health system since independence; universal free access to maternity care but level of private care seeking related to constrained healthcare resources.	Care provided by midwives but status in system is low; Maternity care follows WHO guidelines; Routine anc provided in primary medical or women's wellness centres	None	None
Suriname	Upper-middle	Maternity care access free but high use of insurance for private antenatal care with doctors	Care provided by midwives but status in system is low; midwives feel under-recognised and scope limited; no formal midwife-led care.	Yes Three rounds of provision pilots in past decade, for ANC	2014-17: 3 hospitals: 9 groups; 2017-21: 1 hospital 12 groups; 2019/20 - 3 regional clinics
Ghana	Lower-middle	Universal; free access to maternity care but with payment out-of-pocket for medical tests; constrained health resources and personnel	Midwife-led but severe shortage of professional midwives & reliance on auxiliary cadres	Some experience in other regions	Studies in process in other regions.
S. Africa	Upper-middle	Universal, free access to maternity care and children under 6 in the public health sector which typically follows WHO antenatal guidelines. Private sector maternity care is paid fee for service, and often only used by those who have medical insurance (approximately 20% of the population). Recent severe impact of austerity on public sector health budgets, the public health sector services 80% of the population	Most care in the public health system on the primary health care platform is delivered by a range of nursing cadres. There are however midwives in the public service to provide more specialist maternity care than nurses can. In the high-risk referral hospital context midwives provide the routine antenatal care package for low risk women. High risk women also engage with clinicians on their care pathways.	None for antenatal care that has been integrated into the public health system.	None

3.1 Themes identified across the seven countries

Despite the wide range of contexts in GC_1000 some key themes emerged in relation to barriers and facilitators to implementation, scale- up and sustainability. These are discussed in more detail in other reports (WP4, WP6) but here we highlight key patterns in relation to the CFIR domains, from influence of the wider policy and system context to the more micro-level of individual practices and experiences, as well as features of the care model itself (the intervention = group antenatal or perinatal care) and the approach to implementation (the process)

Health system factors

The context analysis highlighted the importance of health system factors. The countries involved fell into three main types of health system funding and access which can be described broadly as universal (UK, Ghana), mixed private sector and public sector in Suriname, Kosovo and South Africa, social insurance-based (Belgium, Netherlands). South Africa has a public health system, which services about 80% of the population, this ensures the right to access health care for every person in the country. There are however high levels of inequality in health care in the country, given a two-tiered health system, uptake of private care remains high among more affluent people. Also, limitations in midwifery staffing in some settings mean much of primary maternity care is provided by a variety of nursing cadres. Similarly, resource limitations in Ghana mean reliance on auxiliary health workers to supplement midwifery care. In Suriname, the public sector provides free maternal care but there is high recourse to private care among more affluent citizens while in Kosovo patients in the public sector are typically required to make small co-payments and cover medication cost. The challenges in each of these main types of health system differed.

In universal systems, change typically needs to be supported by national policy priorities and the resource allocation that follows these. Social insurance-based systems share some features, but services may be more dispersed organizationally requiring complex negotiations between systems to ensure financing for a new care approach. In more private-public mixed systems, private systems are not typically accessible for communities prioritized for Group Care, but public services may be perceived as lower quality and less desirable to access leading to higher use of private care among those with more financial means (Kosovo, Suriname, South Africa). In some settings this may also reflect relative status of midwives and doctors (Suriname, Kosovo, Belgium). For example, a report on maternity services in Kosovo identifies that 93.5% of antenatal services are provided by gynecologists, with 71.3% of women receiving ANC in the private sector (KAS 2020). In Belgium, due to the way services are designed, awareness of midwifery care is low.

In some systems (UK, Netherlands, South Africa, Ghana) midwifery and nursing care is well established, and midwife-led care is institutionalized, even though in practice midwives may continue to have limited power and autonomy. Routine care except for women with obstetric risk factors is typically provided by midwives. Group care can be facilitated by different professionals but most typically by midwives. In countries where midwifery is less autonomous (Suriname, Kosovo, Belgium) challenges were experienced in relation to duplication of care, with family doctors or gynecologists reluctant to relinquish routine visits, and in Belgium midwives were not remunerated for providing group antenatal care, so funding needed to be obtained through specific routes.

This could also be reflected by patients who are familiar with medically-led care and sometimes regarded routine medical care as necessary, even if midwife-facilitated group care was desired. For example, in Suriname a woman explained:

> *"We also indicated that we do not want to miss the gynecologist appointments. You see it as additional, not as a replacement.".*

Midwives in Suriname similarly noticed that women often preferred to come back for one-on-one medical consultations after group antenatal care, although they continued with group care.

In Suriname, interviews with facilitators captured the feelings of frustration experienced by midwives in relation to the implementation context. Hierarchical health and societal structures meant that midwives were not as actively involved in implementation as they could have been, and difficulties were encountered in relation to organizing and funding the care. This midwife, for example, commented:

> *"I mean.. Is the light off with us, that they can't see us? You know how some people have cameras at home and a screen that shows all places? Well, at the midwives it's off, it's dark. You can't see anything there."*

Another commented on the lack of consultation and involvement until the training invitation:

> *"They never spoke with us, before the training, like: 'You know, sister, what do you think. We want to start this, are you okay with your clinic being selected, how big is the group,' etcetera. No. We just received an invitation: there will be a training. And that was it."*

Given this context, however, the positive responses of midwives to the workshops and in facilitating group care in practice was notable and suggests that the model was nonetheless experienced positively and aligned with the midwives' ideals of good care (see Chapters 5).

Similarly, in Kosovo, duplication of visits with gynecologists was a challenge, since midwifery care lacked full recognition, and in one site gynecologists would not provide information to women about the group care or recommend attendance, affecting uptake, so that only one group could be implemented. In both sites, small incentives were given to women to encourage attendance, and to midwives to maintain their motivation, but this would not be sustainable in regular care. In Belgium, where antenatal visits with gynecologists are also common, the sites identified links with supportive gynecologists to help to sustain the work but nonetheless, considerable duplication of care was observed. For example, this midwife commented:

> *'And then a third challenge I think is getting GPs and obstetricians on board. And so you sometimes feel like you have to convince them of the value of what we're doing and sending emails, not getting a response. But yes, I think that's in our work of midwife in general. But yes, it's still a challenge, you put a lot of work into it, to send all those e-mails to the doctors and then you don't get any response from them, they put the women for a monthly check-up with them anyway… (focus group with facilitators)*

Overall income level and health resources did not emerge as a key factor despite the variation in settings. A shortage of health personnel, particularly midwives, and lack of transitional funding to support innovation was a barrier in high as well as lower-middle income countries. Existing evidence

shows that group care does not necessarily save health personnel time as the length of sessions is longer than individual visits and they are facilitated by two providers – instead the focus is on improving quality of care within the resources available. In some settings in our evaluation, one midwife worked with a maternity care assistant or a community health worker, lowering cost but also responding to shortage of professional midwives.

Similarly economic circumstances of families were an important potential barrier. Even the high-income countries, social inequalities and the focus of care on more underserved communities generated concern about whether pregnant women could exercise maternity rights in practice or afford the time for longer care sessions. For example, in the UK, all women except undocumented migrants have a right to paid time off work for antenatal care but those in more insecure occupations or with 'zero-hours' contracts are often not able to use these rights in practice. Women with other children under school age also found it more difficult to participate in longer visits without a creche or playgroup in the venue. In Suriname, midwives commented on these potential barriers but also highlighted the facilitating element of care that is engaging and providing a higher level of social support:

> *"Now some have part time jobs, everything is expensive. So people are more likely to choose to earn something extra than to come sit here for two hours. Right?"*

Despite this concern, another midwife mentioned how the economic situation actually motivated her to start group antenatal care:

> *"The situation is not getting better, but I think people are happy to belong somewhere, to tell their story."*

There was variation in the level of previous experience in group care, suggesting that structural factors may lead to enduring barriers even with positive experience of a new model of care. Suriname, for example, had previous pilot projects for group care, yet implementing, scaling up and sustaining were found to be challenging. In contrast, in South Africa, with no prior experience, once initial barriers to starting implementation were overcome, significant progress was achieved in the maternity hospital site, largely due to supportive management in the hospital and a midwife champion. Countries like Kosovo, with no prior experience, started with services that showed readiness, but even then, difficulties with lack of support from medical professionals in one site led to delays while an alternative site was located. In the Netherlands, with more prior experience, projects focused instead on scale-up and diversity of inclusion. This was echoed in Belgium, where group care was novel, but a focus on more vulnerable women as well as collaboration with other agencies (see table 4.5) enabled midwifery practices to access additional resources to implement group care as a public health and equity priority. In Belgium also, since antenatal care with midwives was not an established norm, the teams commented on the considerable time and energy that had to be expended convincing a range of stakeholders of the value of the model, and then in encouraging regular attendance among women who often viewed it as an optional addition to usual antenatal care, rather than an alternative to it. In the Netherlands, although group care and midwife-led care are more established, there is limited integration between hospital and primary care. In Belgium one setting involved co-facilitation by primary and hospital-based midwives but more work on integration would be needed to support further implementation of groups with a mix of lower and higher risk women. This complexity also arose in South Africa, women who are classified as high risk follow a different pathway of care than low-risk women; only low-risk women were included in groups in the South African hospital site, because this was the first time the model was being tested.

Impact of the Covid-19 pandemic

Implementation was delayed in all countries by the impact of the Covid-19 pandemic. This went beyond the immediate impact in terms of inability to meet in groups, as the effects on capacity of often already strained health system and economies were marked. It has been shown that pandemics expose and sharpen existing inequalities and structural vulnerabilities, and this was reflected globally in maternal and newborn care systems (Davis-Floyd et al. 2021). In Kosovo, the UK and Netherlands, the teams initially worked on potential adaptations to provide group care online when physical groups were not permitted, but all countries aimed to return to the concept of face-to-face group care once possible. In some countries (Ghana, Suriname), plans to hold groups in outdoor spaces were considered, with individual checks in a nearby clinical room. Initial training workshops had to be conducted with mask-wearing, but professionals were accustomed to working in this way. The pandemic had particular implications for timing of implementation in South Africa and the UK because of high rates Covid-19 infection as well as impact on health personnel. For example, in South Africa the original sites that were identified as starter sites to implement and test in were converted to Covid-19 vaccination sites and hence it was no longer possible to introduce Group Care in them. In the UK some staff with nurse training had been redeployed to Covid-19 related care and maternity services were generally not prioritised, and health professional stress and burnout added to existing staffing shortages, as some took early retirement. In addition, midwives observed an impact on women of successive lockdowns: while people were keen to regain lost social contact and support, there was also caution about any kind of group-based activity, which had become associated with risk and danger of infection.

Previous experience with the model of care

Countries varied widely in level of prior experience, with group care most established in the Netherlands. Despite this, the midwives in the practices in Rotterdam, where the GC_1000 project was mainly focused as it did not have implementation of group care before expressed varying levels of openness and confidence in implementing the model. Some were very cautious about facilitating groups for more socially deprived women or saw the purpose and likelihood of take up different for different social groups and had reservations about diverse groups. Reasons for caution included concerns about group size and continuity when people with complex lives find it more difficult to attend consistently, with additional worries about the cost implications of needing to provide additional individual appointments. Additionally, some midwives expressed concerns about managing time and interaction with mixed languages in the group. This illustrates that even in countries with previous experience, implementation and scaling-up of a care model may be challenging.

Table 3.2 Summary of contextual influences using the CFIR framework

CFIR construct	Sub-construct	Context and findings on implementation
INTERVENTION CHARACTER-ISTICS	Evidence strength & quality	Systematic review evidence exists of benefits for more underserved and disadvantaged communities; engagement and satisfaction with care and provider satisfaction (Byerley & Haas 2017); however, participants understood the evidence more fully through participation in the workshops, supported by programme materials and meetings and by the experience of facilitating group care and feedback from participants.
	Intervention source	Engagement and involvement with a range of stakeholders was built in and experienced as vital throughout. GC_1000 country teams had local and national networks & credibility. Final stakeholder workshops including range of actors was recognised as important for sustainability post-programme
	Relative advantage	Stakeholders perceived benefits especially for more underserved populations, but some had reservations about acceptability and costs compared with individual care
	Adaptability	Programme built in RQI and adaptations packages to ensure sensitivity to context; some planned and unplanned adaptations made without major impact on fidelity of the model;
	Trialability	Antenatal and in some countries ante-and postnatal groups were piloted on a small scale in each country depending on previous experience with group care and context challenges. Small-scale pilot seen in some settings as vital to test local feasibility and impact but had implications for costs of care. Evaluation was built into programme structure and each phase of work.
	Complexity	Implementation was complex, requiring training, planning with a range of stakeholders, financial and staffing arrangements, obtaining venues, materials and handbooks.
	Design quality & packaging	Development of modules, handbooks and attractive information materials for service providers and users was important to support implementation. Trainers provided follow-up mentoring
	Cost	Costs of the time for training and planning were potential barriers in resource constrained health systems in high as well as low-middle income countries. Costs of implementation per se were significant and could be challenging without external support or transitional funding; Costs of time for group sessions lasting 2 hours were a major factor, particularly when services had difficulties in recruiting and retaining 8-12 participants. Many groups were smaller for reasons including impact of Covid-19, recruitment challenges rooted in unfamiliarity of the model, discomfort with the group setting and concerns about time to attend longer sessions, loss due to miscarriages and population mobility and rural settings with smaller maternity population.
OUTER SETTING	Patient needs & resources	Groups were targeted where feasible to more underserved socio-economically disadvantaged communities, where care uptake is lower and maternity outcomes often poorer
	Cosmopolitanism & peer pressure	The partner organisations in each country drew on their networks to engage services; the services involved were typically those with higher readiness and external connections, so engagement work needed for scale-up.
	External policy and incentives	WHO policy advocates in context of evaluation but most countries did not have policies specifically to support this model. Health system structure and funding models typically formed barriers to implementation despite broader policy motivations to improve uptake, equity and outcomes of care and to enhance respectful care, mental health and public health. Health systems in the seven countries varied between universal, social insurance and public/private mix. Lack of midwife-led care or scope and autonomy of midwifery in some countries posed financial and system barriers to implementation because of limited status, roles in decision-making, and in some settings (Belgium, Suriname and in some settings in Kosovo) duplication of maternity care with gynaecologists or family doctors. While health policy in several countries (e.g. Suriname, UK, South Africa) advocates more preventive and public health care, resources remain typically focused on secondary/curative care.

INNER SETTING	Structural characteristics	Maternity service configurations varied widely with some more hospital-centred and others more community centred; rural settings had challenges of patients' numbers and clinic accessibility; most had challenges relating to boundaries between different services or parts of services, such as hospital and community care settings, or health services versus municipalities. In Netherlands and Belgium midwifery practices had more independence but experienced challenges in integration with wider services. While in Belgium, lack of establishment of midwife led antenatal care was a barrier, the more autonomous professional role of midwives in the Netherlands and the UK, with midwife-led care for low-risk women was a facilitator.
	Networks and communications	Communication and integration between different parts of a service were important but sometimes challenging – in some cases led to duplication of visit schedules, inappropriate rostering of midwives which undermined continuity.
	Culture, implementation climate & tension for change	Services were in effect 'demonstration sites' with a higher level of interest in and readiness for change; some were characterised by strong leadership and motivated professionals. The hospital in South Africa, for example, was 'mother-baby friendly' and midwives received positive leadership support; the hospital was observed to be a welcoming environment with positive and respectful messages for patients; for scale-up their experience needs to be translated positively to a wider range of services.
	Compatibility	As small-scale pilots, group facilitators were typically volunteers aligned with group care values, open to change, motivated to enhance service engagement, equity and outcomes; nonetheless, they and those with more reservations found reinforcement through the experience of the role modelling in training workshops and the experience of group facilitation, with programme and local leadership support. Some undertook 'train the trainer' courses provided in some settings (UK, Ghana, Suriname Kosovo and Netherlands) to help with future spread and sustainability. Sharing experience with other professionals was encouraged.
	Relative priority	Implementation in the programme tended to occur in the organizations where leaders recognised the potential benefits and promoted the concept.
	Organisational incentives and rewards	Potential incentives for facilitators could include working with more autonomy; most commented on the professional satisfaction and enjoyment of working this way. In Kosovo and Suriname, midwives wanted economic incentives to provide group care as it was perceived as additional to their usual work; in both contexts midwives felt their roles were not sufficiently recognised and they lacked autonomy and power in the services; duplication of visits by gynaecologists was a financial challenge, as funding for midwifery care was less likely to be prioritised in health system expenditure.
	Goals & feedback	The support and evaluation built into the GC_1000 programme would need to be replicated in local systems to support scale-up and sustainability.
	Learning climate	Organisations with an open and positive learning climate were more likely to be engaged in a programme of this type; nonetheless, aspects of the implementation (training, reflections, mentoring & evaluation) were reinforced by the model itself, which is focused on active and interactive learning.
	Readiness for implementation	Even those services with more readiness for involvement commented on the value of training and provision of materials and handbooks and other forms of support to begin implementation. Train-the-trainer workshops were important for sustainability by cascading the relevant knowledge so that organisations could continue to scale-up with the external training support of the GC_1000 programme. Training would need to be integrated into regular professional education in future.
	Leadership engagement	Commitment, involvement and engagement of leaders was reinforced by setting up steering groups and convening stakeholder meetings.
	Available resources	The GC_1000 programme provided in-kind resources to support initial implementation. Key local challenges included lack of rooms large enough for groups, lack of free access to suitable community-based venues, lack of budgets for snacks or to buy materials. Staffing shortages and lack of time to free professionals for training and for facilitation of the groups was a widespread concern and a major challenge in high and lower-middle income countries.
	Access to knowledge and information	The information and support provided by the programme would need to be replicated in services for scale up, including relevant clinical guidelines and clinic schedules, summaries of supporting evidence, skills to provide the training workshops (train-the-trainers sessions and midwife handbooks were provided in several countries to support this). Group Care Global modules were developed and all resources to be fed into GC_1000 toolkit.

CHARACTERISTICS OF INDIVIDUALS	Knowledge and beliefs about the intervention	Although professionals who volunteered were more likely to be open to the intervention the style of the training was observed to be a key component in professionals and managers understanding of group care principles and potential benefits, for providers as well as for patients. Experience reinforced interest and was found to allay concerns of some professionals who had more reservations about the value. Professional or manager reservations, noted for some in all countries, included concerns about: lack of privacy, limited 1-2-1 time, reluctance to include women with risk factors or to facilitate diverse groups, worries about more patient-led discussion and the accuracy of self-assessments
	Self-efficacy & Individual stage of change; personal attributes	Some professionals also shared their personal lack of confidence in group facilitation, that they would be too introverted or unable to manage any difficult group dynamics, or would not know how to deal with 'wrong' information shared by parents. The style of the training workshops helped to address fears and provided opportunities to practice skills; most were observed to grow in skills and confidence over time but constrained resources in some settings limited take-up of mentoring and reflection sessions; midwives in some settings (e.g. South Africa) spoke about learning from the groups, they saw the group as a co-learning space. Women participants, and where relevant their partners, talked about gaining in confidence through the interactive discussion and their involvement in health checks. Not all professionals initially welcomed the learning style but interviews and survey responses highlighted that most found it rewarding and enjoyable in practice.
	Patient/client circumstances	In high as well as lower-income countries, with high levels of disparity, lack of time and personal resources could deter take-up of longer visits. Not all parents would receive maternity benefits such as paid leave for care, support for childcare or ability to bring food to share.
PROCESS	Planning	Planning for implementation involved identification and analysis of contextual challenges and opportunities (RQI) and then supported by WP4. Training workshops and modules, development of support materials were a key aspect. Considerable time was spent by providers in identifying suitable venues and resources.
	Engaging	Engagement with decision-makers and communities was an important aspect and included in some settings inclusion in training workshops. Continuing engagement via steering groups and later workshops with stakeholders was important to maintain engagement.
	Opinion leaders	Identifying and supporting local champions was key to progress.
	Formally appointed implementation leaders	GC_1000 teams were key actors initially but sought to transfer leadership to local service personnel. E.g. in the UK, consultant midwives acted as lead investigator for each site. In South Africa the manager of the outpatient ANC clinic within the maternity hospital was nominated as the implementation lead in the hospital given this was her area of oversight in the hospital. She needed to report on progress to those higher up in the bureaucracy, the nursing manager was her immediate line manager.
	Champions	The midwife-facilitator in the hospital in South Africa was a champion for the model, supported recruitment of women, manually scheduled women into groups as current scheduling systems are not set up this way, spoke to her colleagues in other departments in the hospital and provided regular insight on what she enjoyed most about the model to others in the hospital. She also completed Master training in the hopes of training others in the hospital to facilitate more groups. One concern though, is that her manager is worried about burn out due to all the time she invests in Group Care.
	External change agents	The GC_1000 consortium partners acted as key external change agents but sought to involve relevant health and social care and community-based organisations that could continue to support implementation after the programme.
	Executing	The programme structure with regular country and work-package lead meetings provided a structure and momentum for implementation.
	Reflecting & evaluating	Regular GC_1000 meetings were complemented with local steering group or national advisory group meetings, with review and reflection on progress. Group care trainers provided follow-up mentoring for facilitators and offered reflection sessions. Evaluation was conducted alongside implementation but facilitators were also encouraged to evaluate their own work.

CHAPTER 4 – ADAPTATIONS

This chapter draws on the findings of Work Package 3, which was conducted alongside the Rapid Qualitative Inquiry to identify and recommend appropriate adaptations to support implementation of group care in each country. The aim was to enable adaptation to context, to support feasibility, acceptability and sustainability while maintaining fidelity to the core features of group antenatal or postnatal/well-child group care. The analysis and recommendations for adaptations at surface and deep structure levels, according to the Cultural Sensitivity model (Resnicow et al. 1999) was informed by the Model for Improvement (Langley et al. 2009) and built on the findings of the RQI conducted in WP2. Further detail of recommended adaptations can be found in D3.2.

4.1 The model

Group antenatal or postnatal care is a model that combines elements of clinical assessment and learning with the aim of facilitating social connections. One of the most established models is 'Centering Pregnancy', developed by a midwife in the US to tailor care to the needs of socially disadvantaged communities who experience poorer access and care quality (Rising et al. 1998). Group antenatal and postnatal care combines clinical checks with information sharing and is typically provided by the same two midwives (or other maternity care providers) facilitating a group of around 6-12 pregnant women. Individual clinical checks (e.g. palpations) are brief and conducted privately within the same space as the group with the intention of maintaining an interactive approach. The model was developed in response to recognition of the importance of social support during pregnancy and the transition to parenthood and known limitations of didactic approaches to teaching and learning. Furthermore, women are not viewed as passive recipients of care, but are encouraged to make informed decisions, provide informed consent (or refusal), and to take an active role in their care to attain the best outcomes for themselves and their babies.

4.2 Planned Adaptations

A range of planned adaptations were recommended during WP3 building on the RQI. These were always adaptations that maintained fidelity to the core model (described in 4.1) but were designed to support feasibility and adaptation to the national or local context and so were primarily focused on supporting implementation work (details of planned adaptations can be found in D3.2). Examples include, for South Africa and Ghana, professional supervision of self-checks because of low levels of literacy in some patients and clinical concerns about an incorrect blood pressure measurement. In

South Africa an explicit plan for education and testing on how to measure blood pressure was incorporated into the first session with women. In Ghana, the materials for use in the groups were adapted where relevant to include more pictorial rather than written content, although use of a range of accessible and engaging materials, such as photographs, buttons to indicate choices and baskets of healthy local foods, was a shared feature of group equipment in all countries. In South Africa, the content in the facilitator guide was adapted to prevalent social and clinical conditions and in Ghana, materials for participants were adapted to mainly pictorial forms in response to low literacy levels.

In each country and site, the implementation teams supported by GC_1000 teams and/or their local Steering Group additional adaptations of this type were often planned during the course of implementation and often reactive to contextual needs or challenges. For example, a range of sites (UK, Ghana and South Africa) encountered difficulties in accessing venues suitable for group care as antenatal care had typically been conducted individually in small clinic spaces. In one UK site, therefore, the local team planned a mix of group and individual visits, to cope with this barrier, as well as an acute midwife staffing shortage. However, with a focus on fidelity of the model, this planned adaptation was eventually discontinued since it led to confusion around scheduling and undermined confidence in the model where clinical care is provided fully in the group space. In the other UK site, to adapt to this challenge, the brief clinical checks had to be conducted in an adjacent room, but midwives focused on ensuring this did not detract from the group interaction.

In several countries (UK and Ghana) snacks were not routinely provided in the groups as this was considered unsustainable in the health system. Midwives used knowledge of the group's personal situation (such as poverty levels) to consider whether to invite participants to bring snacks to share.

Some groups, particularly in Belgium, focused particularly on care for migrant or refugee women, incorporating the use of interpreters or professionals with relevant language skills. In the Netherlands, a group for women from a migrant background was adapted to run online only, initially in response to Covid-19 but then as it was known that the community was widely dispersed throughout the country (note this group was not included in the main data collection as online only with individual health checks). Additionally, groups were implemented in asylum-seeking centres.

In all countries, antenatal group care was usually facilitated by one or two midwives, in line with core principles to include at least one maternity professional to provide clinical care in the group space. Most planned to have facilitation by two midwives (Kosovo, UK, Suriname, Belgium, South Africa). However, it was acknowledged in several countries that for financial and human resource reasons facilitation by two professional midwives may not be sustainable. In Belgium, in one group there was co-facilitation of one midwife and one social-worker. In Ghana particular shortage of midwives in the rural areas led to plans to include auxiliary health workers, while in Netherlands, higher costs of

midwife care led to plans to include the maternity care assistants working in the midwifery practices, for which a co-funding arrangement was eventually achieved. In Suriname and the UK where postnatal or parenting groups were implemented in some sites, midwives collaborated with other providers such as health visitors and nursery nurses in the UK or other support workers, or midwifery students to facilitate the care. In the Netherlands postnatal groups were also implemented in three asylum seeking centres facilitated by youth health visitors.

Inclusion of partners or support persons in group care is variable internationally and not part of the core Centering-based model. Plans for involvement of partners varied in response to local norms and group preferences. For example, inclusion of male partners, although it could present challenges, was considered a priority in Suriname and fathers' involvement in the postnatal groups was high. In South Africa, in contrast, father's involvement in antenatal care was untypical and the groups only included the pregnant women. In the UK, each group decided during the first session on the role of partners so that it was variable, with fathers typically encouraged to attend late pregnancy sessions where birth preparation and adaptation to parenthood was a focus, often combined with a tour of the maternity unit. A similar approach was used in the Netherlands, where support was provided in the training workshops for facilitating mixed groups and ideally partners were invited to attend at least two sessions. In practice, however, partners were not always included because of lack of space and the additional time needed, particularly given that partners are not covered in the reimbursement system. In Ghana, there were plans to include partners in some sessions but in practice midwives found the partners were not responsive to this as typically they are not involved in antenatal care.

There was some variation also in whether countries planned to include only low-risk pregnancies (South Africa, Kosovo, Netherlands in all but one site) or a mix of participants in terms of risk status (UK, Belgium, Ghana, Suriname). In Belgium, midwives usually only provide care for low-risk women but as women in the groups were often vulnerable, those who developed risk factors received obstetric care but also continued in the groups. All countries planned to include first time and subsequent parents.

In some groups (Belgium, Netherlands, UK) not all women could speak the majority language and so interpreters needed to be incorporated in the groups. In the UK, prior feasibility work had identified that interpreters (often bilingual health advocates) appreciated the model as it enabled greater continuity with the women and engagement with the group. One UK group also included the use of a sign-language interpreter. In Ghana, in this rural setting midwives were often posted from other regions so that a facilitator for each group needed to be able to speak the relevant local language. In the Netherlands, one midwifery practice offered bilingual groups (English and Dutch), albeit not without complication. Materials were not translated ahead of sessions, some midwives lacked English language skills and group cohesion was affected:

"We switched almost completely to English, but that also excluded one or two women a bit." (Woman NL)

In the UK, interpreters were used in groups requiring this support, but midwives considered that two additional languages were a maximum that could be facilitated, and ideally only one additional language. A benefit identified in previous feasibility work (Wiseman et al. Under review) was that group care could facilitate greater continuity for interpreters (ideally cultural mediators/bilingual health advocates) enabling them to develop an approach to interaction in the group. In Suriname, facilitators used google translate to explain to a Spanish speaking postnatal care couple.

The number of visits in each country was planned in line with national norms and policies for antenatal group care, with the aim of replacing routine antenatal (and where relevant postnatal) care rather than duplicating this. In the UK, Netherlands and Ghana, for example, referrals for medical visits were only made if women had or developed specific complications or risk factors, and participation in the group continued to provide their regular midwifery care. In Suriname, however, additional parenting care was identified as a priority and in one site group care was planned to continue until babies were two years old. In most countries groups were for around 2 hours, as planned, although in the UK, some postnatal sessions were reduced to one-hour since lack of need for routine health checks allowed sufficient time for group discussion, and in Suriname, where need for more parenting advice had been identified, some postnatal groups were longer (55% of postnatal groups were longer).

In Ghana, because of rural settings, limited coverage of professional midwives and low literacy levels, the country team planned to use the Check2Gether kit and evaluate the possible additional benefits in all but one setting (for a control group). The kit is provided in a backpack, for ease of transport for use in remote rural areas and includes accessible equipment for common pregnancy health screening that can be used by auxiliary cadres as well as professional midwives. It was hoped that the addition of the kit would improve referral rates to hospital for women with medical complications. A linked evaluation of the use of Check2Gether identified that the kit works well regarding increasing access to maternity care, timely referral and user satisfaction (both HCP and women), hence, overall improving the quality of care. However, there were concerns raised about the supply chain and its cost, unless the C2G kit is integrated into the national health system and/or transitioned as a social enterprise model.

4.3 Unplanned Adaptations

Across the seven countries, there were few unplanned adaptations since the teams met regularly to plan work, so that reactive adaptations were generally planned locally, as illustrated above.
Key responsive or reactive adaptations were:

- Use of separate space for clinical checks because of smaller rooms, and in some settings concerns about privacy
- Longer clinical checks in specific groups or sessions because of low group number
- Longer clinical checks for client-related reasons or reflecting midwife lack of familiarity with the model

In the UK, where some checks were longer when groups were small, observers noted that interactive group discussions continued, and the midwives interviewed indicated maintaining a strong focus on returning questions and discussion in the group whenever appropriate. In South Africa, researchers observed that the increased trust engendered through the group interaction motivated women to confide in midwives more during the individual clinical checks and this unanticipated care benefit was seen as an important reason to take a flexible approach to the time taken in the checks. In Belgium, midwives often found it difficult to keep checks to around 3-5 minutes – this way of working was not well established but also they were caring for a vulnerable client group and in some groups, interpreters were used as women did not speak Flemish. In addition, they perceived the vulnerability of the clients meant that additional time may be needed for psychological and social support such as assistance to find housing or childcare. In one of the Dutch settings, time management during health checks was a major challenge and some midwives described a compromised HCP-client relationship. These challenges also reflected the early stage of implementation for many midwives, and as level of experience developed this was found to be reduced.

> *"That you almost don't dare to ask how things are going, because you don't really have the time to think about it in three minutes. That's not realistic." (Focus Group facilitator)*

Such challenges reflect the early stage of a programme implementation where most facilitators are new to a model of care. In the UK, for example, observations and interviews identified that midwives had developed their skills and confidence with experience. In the Netherlands and Belgium, the regular intervision sessions provided by the GC_1000 trainer were considered important to reinforce learning, and midwives brought such challenges for discussion, while in the UK, midwives' take-up of reflection sessions was limited, despite the expressed value of these, because of severe staffing pressures.

4.4 Training provided

As part of the Programme, a consistent approach to training was provided, drawing on the experience of Group Care Global or CenteringZorg trainers, all accredited and co-ordinated by Group Care Global. A sample of training workshops in each country was observed by researchers using a topic guide developed by the WP5 team and in some settings (e.g. UK, participant evaluation sheets were also used. In the UK, as the CITY team had developed a bespoke training programme for previous work on group care (REACH Pregnancy Programme) local trainers and GCG consultants co-facilitated the workshops. Follow-up mentoring was provided by the consultants but was not always taken up as professionals' time was often not released for further development.

Analysis of the observations illuminated the importance of the style of training as a way to role model facilitation skills and embed experiential, embodied and often emotional understanding of the principles of this model of care. The workshops were planned and designed in the manner of group care sessions and the trainers modelled a facilitative role, which included ideas for and practice with a range of activities that could be included in the groups to encourage interaction and a participatory approach as well as practice with techniques such as reflecting questions back to the group and encouraging participants to evaluate and discuss information about pregnancy and birth. Midwife participants in South Africa, for example, appreciated practicing technique for reflecting questions back and reframing questions went asked for discussion in the group as they were more used to a didactic style of information provision.

The interactive style meant that participants could express doubts and concerns, opening these up for discussion to address any worries they had and identify strategies for facilitation. The observer also noted that while participants tended to sit in groups with unknown colleagues initially, by day-2 they were mixing as a group more. Similarly, in Ghana, participants were observed as able to address concerns; doubts were raised about the time involved, as the midwives were used to considerably time pressures, and the women's capacity to understand the information since often they found women had not retained or understood information given in antenatal care and worries were explored about how the women would interact with each other, and how to maintain confidentiality. In a focus group following the observation, the midwives expressed how the style of the training helped them to gain confidence in the approach, reflecting on how they themselves learn most effectively.

Table 4.1 provides an overview of the training provided in each country within the GC_Progamme

Country	**Type of training**	N. workshops	Participants	Total participants
South Africa	Facilitator training 2-day workshops	3 workshops	10 midwives (MWs), 9 nurses, 4 researchers, 7 managers 7 community health workers 1 social worker, 1counsellor 1 interpreter	40 :
South Africa	Master training (train-the-trainer)	1 workshop	1 researcher 1 midwife 1 manager	3
UK	Facilitator training 1-day workshops	4 in site 1. 2 in site 2	Site 1 – 15 MWs, incl 1 student; 18 health visitors, inc 1 student, 1 community health assistant, 2 nursery nurses, 1 Maternity Voices lead Site 2 – 16 MWs, incl 1 student	37 site 1 16 site 2 Total: 53*
UK	Master training (train-the-trainer) 1-day workshop	1 (in site 2)	15 MWs, including 2 students & 1 midwifery support worker	13*
Ghana	Check2Gether kit training 2-days	1	4 midwives/14 community health nurses across the 5 sites	18
	Facilitator training 2-day workshop	1	6 midwives/18 other health staff	24
	Master Training (train-the trainer)	1 workshop	14 midwives, 1 nurse 6 community health nurses 4 master trainers	25
	Facilitator training 2-day workshop	1	13 midwives across the 3 sites Plus a number of stakeholders	13
Netherlands	Facilitator training 2-days	2 workshops plus 1 focused on postnatal care and 1 per location for other staff	7 and 6 midwives in implementing practices 2 cultural mediators 7 child health professionals	22
Suriname	Facilitator training 2-day workshop	2	4 master trainers 5 doctors, 8 nurses 3 researchers	20
	Facilitator training 1-day	1	4 master trainers 5 doctors, 8 nurses 3 researchers	
	Refresher training	2	6 master trainers 8 midwives (1 GC experienced) 5 researchers, 2 managers 5 doctors (1 GC experienced) 8 nurses	14 20
	Master training	1	1 researcher & 4 midwives	5
Kosovo	Facilitator training & refresher	2 (1 each)	5 midwives from each site 1 midwife from University Clinical Center & 4 AMC staff	15
Belgium	Facilitator training 2-day workshop	2	11 Midwives, 2 social workers, 2 midwife GC trainers to be, 1 psychologist, 1 midwife/researcher	18

* additional training programme in process funded by other funding sources

An important aspect of development was also the follow-up mentoring provided by the workshop facilitators. Each trainer offered regular intervision/reflection sessions to participants who were facilitating group care. For example, in a session in the UK, midwives brought a range of challenges for discussion, including lack of confidence in how to deal with 'horror stories' in the group, or a mix of quieter or more dominant characters, and how to manage keeping individual clinical checks brief by bring generic questions back to the group. In a session in Belgium, midwives discussed scheduling challenges for the co-facilitators who were hospital-based midwives and how to improve the approach to facilitating groups with women who did not speak Flemish. These were taken up well in some settings, such as the Netherlands where this was also required to receive CenteringZorg certification as a group care facilitator, whereas in some countries, such as the UK, participation was limited by staffing pressures, even though midwives recognised the value of reflection and ongoing mentoring. In the Netherlands, such participation is also now reinforced because the national reimbursements system requires certification by CenteringZorg.

4.5 Summary of groups implemented

Table 4.2 provides a summary overview of the groups implemented in the Programme and included in the evaluation

country	Site 1	Site 2	Site 3	Site 4	Site 5-7	Total women	Attendance per group
UK	Midwifery & health visitor teams (Site 1) in a socio-economically mixed area of South-East England ; integrated ante & postnatal groups: 2 teams, 8 groups	Site 2 - NHS Trust midwifery teams in a socioeonomically deprived town North-East of London; antenatal groups: 3 teams, 16 groups	na	na	na	Site 1: 46 Site 2: 120 Total: 166 + sometimes partners	6.8 (4-8)
Belgium	Site 1: Antenatal groups Collaboration of primary health centre, primary care zone, a social organization for poverty reduction & a motivated midwifery team (self-employed).	Site 2: antenatal groups Regional perinatal centre, primary health centres, 'House of the Child' network, local welfare centre & midwifery practice (self-employed)	Site 3: antenatal Collaboration of regional hospital & primary care, regional perinatal expertise centre Midwifery practice & hospital midwife co-facilitators	-	--	Site 1 72 Site 2 83 Site 3 38 Total: 193	Mean 3.38 across sites Max/site 6-8 Sessions conducted were fewer than planned (4.8-7.3)
NL	Site 1: Midwifery practice in relatively affluent community setting; 5 antenatal groups	Site 2Midwifery practice in community setting with high social deprivation & ethnic diversity; 5 antenatal groups	Site 3 Midwifery practice in suburb with high social & ethnic diversity; 3 antenatal groups	Site 4 Midwifery practice in suburb with high social & ethnic diversity; 4 antenatal groups	3 asylum seeking Centers in North of Netherlands : 2 groups per site	Site 1= 19 Site 2=47 Site 3 =27 Site 4= 51 Site 5= 16 Site 6=12 Site 7=12	5.1-7 average across sites that started implementation
Kosovo	Site 1 - a Family Medicine Centre – planned but withdrawn after change in management.	Site 2 –main family medicine centre, maternity building, 4 antenatal groups	Site 3– Women's Health Resource Centre -one group only (Main Family Medicine Center)				Average 6.1
Suriname	Primary care clinic 1, Paramaribo:	Primary care clinic 2 Paramaribo: 1 postnatal group	Primary care clinic 3 Wanica: 1 postnatal group	Primary care clinic Paramaribo: 2 antenatal groups	Hospital, Paramaribo:	34 women + partners GANC	

	3 antenatal groups and 1 postnatal groups.				6 postnatal groups	61 mother/child dyads PNC	
Ghana	Binduri (very rural region), Area 1 and Area 2: 5 antenatal clinics with Check2Gether kit, providing 18 groups	Area 2, site 6: 1 antenatal clinic, providing 6 groups (3 at health centre and 3 outreach) no C2G kit				.225 women 24 groups in total	
S. Africa	Maternity Hospital: 6 antenatal groups, with 6 visits based in the antenatal clinic; group size range 4-8 34 women in total	--	--			34 women (partners not included)	

Note: numbers of sites and groups here represent the period of recruitment for evaluation data collection only, and so do not represent the total of groups implemented until December 2023 in all countries Netherlands also implemented groups for Eritrean women but these were not included in the evaluation as these were online only, since the women were dispersed geographically and so the model could not include health checks.

These numbers represent total recruited per setting. Not all women attended all sessions so numbers per session could sometimes be lower than planned, as shown in the final column, with implications for service costs but also for group dynamics since too small a group may not support interactive learning and support, just as a larger group may not. In addition, if attendance is low, this may affect continuity and development of social support. In Belgium, for example, where routine antenatal care with midwives is not well established and the groups also focused on including the most vulnerable clients, the aim was for groups of 8-10; the maximum number reached per session was between 6-8 and average participants per session between 3 and 4. In addition, not all planned sessions were able to take place. In the Netherlands, where midwifery ANC is well established, challenges were nonetheless experienced relating to women's life circumstances. Here and in other countries (e.g. UK), although women with obstetric risks could continue in the groups, numbers of additional medical visits meant some found it difficult in practice to continue, even though usually motivated to continue with the group for midwifery and social support. Nonetheless, attendance was relatively high in the UK; for example, in the site implementing Parenting Circles, 97.7% attended all their scheduled antenatal group sessions and 65.1% the scheduled postnatal sessions.

Sociodemographic details of participants

The aims in some countries (Netherlands, Belgium) to focus on inclusion of more vulnerable women, including migrant women, or in ethnically diverse areas (UK) was reflected in rates of participants born outside the country where they were receiving care (table 4.3) and who could speak the majority or national language (table 4.4).

Table 4.3 Were participants born in the country or elsewhere?

Born in the country	Yes n. (%)	No n.(%)
UK	50 (69.4)	22 (30.6) (various)
Ghana*	68 (98.6)	1 (1.4) (Burkina Faso)
Belgium	7 (18.9)	30 (81.1)(various)
Netherlands*	41 (69.5)	18 (30.5) (various)
Suriname	29 (91)	3 (9)
Kosovo*	20 (95.2)	1 (4.8) (Germany)
South Africa	20 (90.9)	2 (9.1) (Zimbabwe)
All	235 (75.3)	77 (24.7)

*survey respondents only for demographic and clinical data

In Suriname, participants' ethnic backgrounds were also noted instead as in-migration is low but for sociohistorical reasons, the population is very diverse: 90% had a Creole (34%) or Hindustani (28%) or mixed ethnic background (28%).

Table 4.4 Speaking the majority (official) language

Speaks main language	First language Yes n. (%)	No n.(%)	Can speak main language well
UK	57 (80.4%)		69 (93.2)
Ghana*	Not available	Not available	Not available
Belgium	7 (18.9)	30 (81.1)	Not available
Netherlands	30 (53.6)	26 (46.4)	49 (87.5)
Suriname	na	na	94% (Dutch)
Kosovo	Not available	Not available	Not available
South Africa*	yes	n/a	Yes

*South Africa has 11 official languages but as a pilot project only those who could speak English were included; Ghana has a range of local languages and primary languages spoken varied across the groups.

Groups in all countries usually included both first time and subsequent parents (primips and multips) (table 4.5). Kosovo included a comparison group of all women receiving standard care in the same settings. This shows that women having their first baby (primips) were more likely to opt in to group care while those who were not first-time parents (multips) were more likely to opt out.

Table 4.5 Parity of group antenatal care participants

Parity	First Baby	Multiparous
UK	33 (45.2)	40 (54.8)
Ghana	22 (31.4)	48 (68.6)
Belgium	7 (18.9)	30 (81.1)
Netherlands	44 (75.9)	14 (24.1)
Suriname	11 (38)	15 (63)
Kosovo*	11 (52.4)	10 (47.6)
South Africa	Not available	Not available

*Kosovo standard care comparison group = primp = 10 (18.5); multip 44 (18.5)

4.5 Fidelity analysis

Fidelity was evaluated through the range of research methods including observation of a sample of group sessions, interviews with providers and participants and facilitator self-evaluation forms using a bespoke excel template to summarise this in relation to core principles of group care. In most cases, Gresh et al's (2023) conceptual model of centering-based group care was used to guide this analysis,

while in the UK a ‘core values and components’ model that had been developed in prior development and evaluation work (the REACH Pregnancy Progamme – Mehay et al. 2023) was used for reference. In both models, the three key elements of interactive learning, social support and community building and inclusion of healthcare were present.

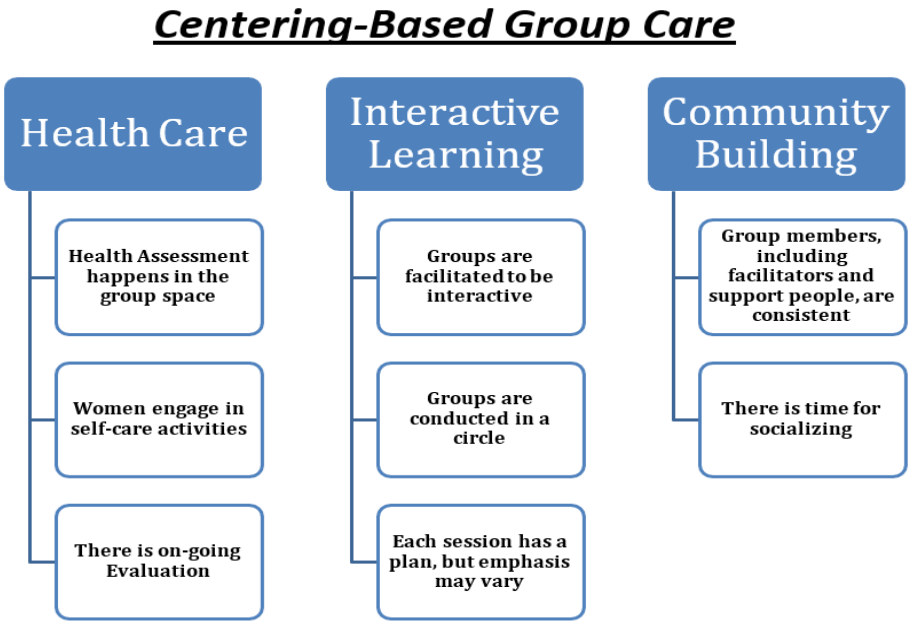

Figure 4.1 Gresh et al’s conceptual model

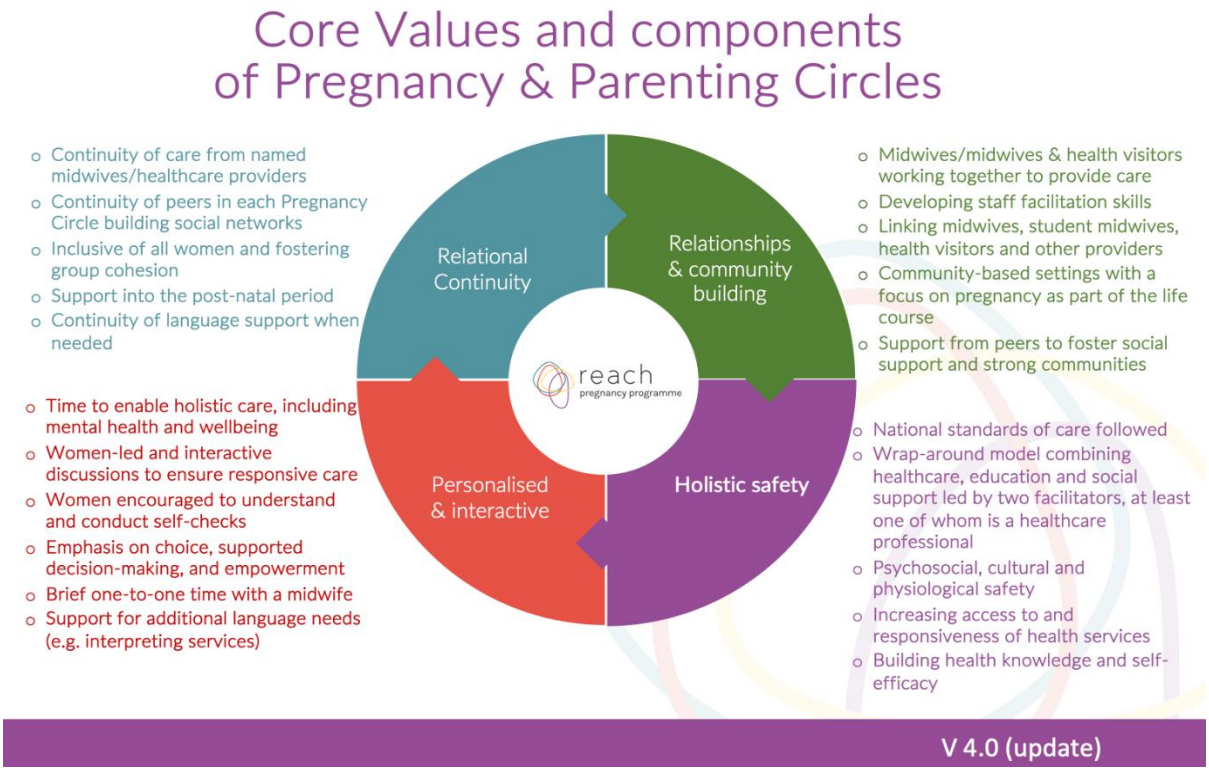

Figure 4.2 Pregnancy Circles Core Values and Components Model

Inclusion of Healthcare in the Group Space

This was present in all countries and as described below under 'experience and mechanisms of care'. In Ghana, stakeholders expressed reservations linked to levels of literacy in this remote rural setting, and so checks were planned to be done collaboratively with women taking readings with midwife supervision and recording, supported by use of the Check2Gether kit. However, women in the focus groups reported only a limited level of involvement in practice. In South Africa, as the model of care was novel the ethics committee required professional supervision of checks, also for reasons of confidentiality of patient data. In both countries however, as discussed below, women participated actively in the sessions, and midwives and women spoke positively of this. In some settings (including UK, Ghana and Suriname, South Africa, one Dutch setting) where rooms suitable for groups were very difficult to access, individual checks with the midwife took place in an adjacent space, but midwives focused on keeping checks brief and bringing discussion and questions back to the group, to maintain the group focus. In some instances, participants also expressed a preference for the privacy of having their clinical checks in the adjacent space, although they appreciated the primary focus on care in the group.

In all countries, the groups were facilitated by one or two midwives. In Ghana, shortage of midwives meant that co-facilitators were often auxiliary workers. In the Netherlands and in one practice in Belgium, co-facilitators were 'youth workers' or 'social workers'; the midwife would take primary responsibility for clinical checks and some social counselling was provided. In the Netherlands this was done primarily for financial reasons but in both countries the choice aligned well with the planned focus on engaging and supporting more vulnerable populations. In another Belgian site, hospital midwives (this specific hospital had already delegated antenatal care to primary care midwives) acted as co-facilitators with the primary midwives, who practice more independently.

Interactive Learning

The principle of interactive learning was modelled in the training workshops provided in each country. Midwives and other providers were able to practise and develop skills and strategies to support active and interactive learning through the workshops and reflection ('intervision') sessions were supported by the training consultants to consolidate these as the group implementation progressed. This element was observed as an important element of the implementation since most were only familiar with providing care on a one-to-one basis, which doesn't require group facilitation skills. In addition, in many settings, standard antenatal care and parent education are delivered in a more didactic style (source: observations of training workshops and interviews with professionals). The professional and parent experience of this style of learning and its impact are discussed in Chapter 5 below.

Observations and interviews revealed that individual professionals varied in the ease with which they developed such skills but found the support of reflection sessions and the reinforcement of the group responses motivated this adjustment. Researcher observations of groups in all countries provided confirmation that discussion topics responded to the participants' questions and concerns – facilitators in each case started with plans for key topics to cover in each session but adapted the content and focus to the group's process. For example, in Belgium, observer notes and facilitator forms confirmed that session content was flexible and adapted to women's needs, with use of listening skills, open questions and very little use of didactic lecture-style presentations. They observed that there were usually interactive opening and closing of sessions and an equal or positive balance of talking between the women and midwives. They noted this was supported by midwives' preparation for sessions, and reflections following them, ensuring a good balance of a 'roadmap' for and flexibility of sessions. Self-assessment using facilitator forms indicated between 92 and 95% self-rating for asking open questions. The researcher observations confirmed these ratings qualitatively. For example:

> *'the facilitators engaged the women through an interactive game and asked for their preferences on topics for future discussions. This approach enables women to take an active role in shaping the content of their sessions. When participants ask questions during the sessions, facilitators address them. A waiting room list is also displayed, indicating a proactive approach to answering participants' questions. What stands out here is not only the adaptability of facilitators to tailor the content to the women's needs, but also the openness of participants to share their questions and concerns. When women are asked if they have more questions, they often respond with questions they genuinely have, indicating an inviting environment for expressing doubts within the group.' (observer notes - Belgium).*

While facilitation may be more challenging in sessions with interpreters needed, observations also identified a positive level of interactivity and responsiveness. For example:

> *'The presence of a language barrier complicated the process at times, yet facilitators continued to make efforts to listen actively. In the sessions in (place), an interpreter was involved. Even though the verbal communication then went through the interpreter, the facilitators made every effort to make eye contact and transmit non-verbal responses in response to these women.' (observer notes - Belgium)*

Midwives were also observed as reflecting questions back to the group where possible, a technique modelled in the workshops, and encouraging the group to work out understandings of different health issues.

Dutch midwives acknowledged that they sometimes retreated to a more didactive facilitation style when many questions were asked, or when the group was less responsive.

> *You bounce the question back but there is no response. Then you fill it in yourself. If you've said about ten times, "What do you think? What do you know?" it feels a bit childish to say this again for the eleventh time*. (Focus-group Site 4)

Community building

In all settings the aim was to have continuity of facilitators and participants throughout the relevant stage of care, with some inclusion of 'guests' or additional people to bring additional value to the sessions. In most, this was achieved, but in some groups (for example two groups in the UK), the impact of staffing shortages, organisational systems not designed for group care and managers who lacked awareness of the model, the continuity of facilitator was not supported so effectively and was frustrating for the facilitators. In the Netherlands facilitator buy-in determined continuity. In one setting a facilitator change took place and the midwife argued:

> *Then I broke all the Centering rules and hosted a session with a student who was super excited about it. That went really well (…) I think enthusiasm is more important than stability in the group.* (Focus group Site 4)

This highlights that planned additional or different participants may also work well if core continuity is maintained.

In some settings (e.g. very rural health centres in Ghana) it was more challenging to plan a group of 6-12 with comparable gestational ages, thus limiting consistency of participants. Nonetheless, women here and in South Africa and the UK were observed to return to antenatal groups even when their babies had already been born, to gain support and share their experiences with their peers. Survey findings and midwives' attendance sheets supported the observation and interview data, showing how continuity was reflected in feeling known by health professionals (see table 5.5 below).

In some groups where participants did not speak the local language confidently, and interpreters were included (Belgium, Netherlands), the teams found it needed more time and skills to maintain the participation and group interaction. In these settings women's life circumstances were also often more difficult, meaning that social support and community building was important but also more challenging to achieve. In general, it was considered ideal to only include one additional language in a group. Despite these challenges, participants in a UK group with an interpreter spoke of how much they valued

the diversity in the group and learning about each others' lives, sharing their pregnancy journey in common.

The impact of continuity and the interactive learning approach are discussed in detail in Chapter 5.
In all settings the usual length of time for the antenatal sessions was two hours. Parenting Circles postnatal sessions in the UK were reduced to one hour for the second and third visits, while in Suriname these visits often lasted longer than two hours.

The greater time made possible through providing visits in a group was observed to make space for the interactivity of the sessions, enabling women to conduct routine self-checks and to engage in more interactive discussion. Space was also made for elements that supported the social aspect of the group, such as provision of drinks and snacks, although these could not be provided consistently in all settings. In Ghana and the UK, for example, the service would not provide budgets for refreshments and decisions were taken to use an approach which could be sustained in that context. Additionally, there was consideration of encouraging participants to bring snacks to share, but providers were concerned about possible social pressures in socio-economically disadvantaged communities.

CHAPTER 5 – MECHANISMS OF EFFECT: EXPERIENCES OF GIVING AND RECEIVING CARE

The observation and interview data, including experiences of facilitators and service users were analysed to understand the mechanisms by which how group care works. Following more inductive coding, an analytical framework (table 5.1) was developed based on a realist review of the literature on mechanisms of group care (that is theories of how group care works to achieve good experiences and outcomes) and analysis of prior work at CITY for the Pregnancy Circles process evaluation (Mehay et al. 2023, Wiggins et al. 2023).

Table 5.1. Analytical framework – Mechanisms of group care

Mechanism	**Description**
Social support and building community	Bringing women together in a group and receiving continuity of peers provides the opportunity for building supportive relationships and social capital or sense of community. Furthermore, trust can form to share experiences and disclose concerns which can normalise pregnancy, encourage problem-solving, coping and resilience leading to reduced stress or worry. It may also shift focus of support to the community and reduce dependency on health services/provider longer-term support.
Peer learning	Learning occurs through peers who are deemed to share similar characteristics as themselves, or the shared characteristic of pregnancy. Information and messages from peers are seen as more salient, relevant, and personalised therefore women are more likely to act on that knowledge. Values different sources of knowledge and expertise and that peers can be positive role models. This modelling leads to greater confidence to take control of their own health by viewing others' behaviours.
Active participation in health	Learning occurs through active participation in health: self-checks, engaging in active discussions, and problem-solving places women at the centre of their own health. Shared health activities and engaging in women-led, group-based discussions supports more equal and trusting relationships between women and health providers.
Active and interactive learning	A group setting allows more time for ANC education and to cover a broader range and depth of a health curriculum. Group ANC is theorised as a space to deliver behavioural strategies through specialised content and practical demonstrations to increase the transaction of 'expert' knowledge and support for women to make appropriate choices for their health.
Relational continuity	A group setting enables more time and continuity with the health providers, facilitating positive relationships between women and their healthcare provider**,** particularly where midwives are able to build relationships which are based on trust.
Engagement& Satisfaction with care	These features lead to greater satisfaction with care, which encourages increased engagement with care. This may also improve detection and management of health problems.
Health professional development and wellbeing	Providers are able to provide richer and safer care with the increased time and continuity. They are theorised to deliver richer and safer care through more positive relationships with women as well as through working together and developing their knowledge with colleagues. This increases job satisfaction, which translates to better care provided and reduced burn-out.
Empower-ment	Components such as interactive learning, peer group and relational continuity help to support self-efficacy, a sense of confidence about health and to seek and use information and make choices. They also help to shift power balances and distance between professionals and clients, countering the hierarchy which is common in healthcare;

This analytical framework was used iteratively, rather than deductively, considering the varied contexts of implementation, adaptations and fidelity across national settings.

Analysis of care experiences in each country in relation to these mechanisms showed considerable consistency, despite the variable contexts including high, low and middle-income countries, and variation in health systems and roles of different maternity provides described in Chapter 3 and the planned and unplanned adaptations described in Chapter 4.

Social support and community building

In each setting, social support of peers in group care was valued highly by the women who were interviewed and viewed positively by providers. Observations of sessions provided further confirmation, describing the ways in which the women informed and supported each other, and the group bonded where there was consistency of attendance. For example, in South Africa women talked about the feelings of support this style of care engendered:

> *"And before this class, you had to do your checks alone and its very scary to do this thing alone and you don't know what to do, it's just nice to be in a group obviously private but you still come back to a group and talk about that if you want to share (Focus Group women GR3 July 2023)."*

Similarly in Kosovo, the social support was valued highly and women indicated a sense of community developed through the group:

> *"…I really needed to come to this kind of group care, to get advice from someone, not to have stress nor to be afraid. I have gone through three abortions and I was in very need for this kind of support that I got here from both midwives and mothers. These days, I know we have the internet and we can get as much information as we want there, but it is not the same."*

Her views were shared by other participants, and one went as far to explain, "the love we had during the sessions is still stuck with us, it won't disappear." (focus group interview)

In the Netherlands, one midwife described a sisterhood:

> *So what we see is that there is during the meetings, there's developing a , how do you say , the motherhood or a sisterhood. That people are not alone anymore, but they are together. They support each other*. (Interview with Midwife)

However, not all women described a strong bond with their peers:

> *So, I had very nice contact with that woman and I thought it was interesting to hear what they thought, but I didn't have a very strong idea of us being a group or anything like that.* (Woman's interview, Site 4)

In most cases this was supported by consistency of participants in each group, although in some settings this was more challenging. For example, in Ghana in one very rural clinic it was difficult to obtain sufficient women with similar gestational age for group care, so the participant mix was more varied with babies due at different times. In South Africa, any women who developed complications left group care as they had to follow a different pathway of care, potentially at a different hospital that provides higher level care, but they continued social support and connection via a WhatsApp group and could continue with the group if they returned to the site for care. The women themselves had initiated this WhatsApp group and used it to stay in touch, to use it as a virtual communication space but also to organize meetups in parks and other places after the babies were born.

There was variation between the countries in whether the groups were implemented to be diverse – for example including all women in a local neighbourhood with an aim for diversity of socio-economic and ethnic background, previous births or whether higher or lower risk, as in the UK, or only able to include women assessed as low-risk, and excluding adolescents, as in South Africa. Where the groups were more diverse, there was evidence from observations and interviews that this also fostered social support, despite occasional concerns from providers and some participants that this might be more challenging. For example, this participant from South Africa commented:

> *"I am not someone to share my emotions and speak about what I'm going through. So, I was sceptical about that because I was like, if I say maybe they will judge me about that; oh, you are just a young one. You know what I'm saying? It was not like that what I went through and my opinion is heard here."*

Her experience was echoed by the facilitators, who talked about the group relationship developing and the skills they used to encourage all participants to feel comfortable and included:

> *"One participant said she cannot speak in a group, but we got her talking and participating. It is very important to allow the introverts space to slowly get into a group. One participant at recruitment said she will think about it because she is not a group person and scared of people. But I saw her today overcoming the fear she was coming in strongly and participating in a group. So, a few quiet people ended up speaking" (Cohort 3, session 1)*

Similarly, in Belgium, facilitators supporting groups with a high level of migrant backgrounds reflected on the value of the shared learning and networking:

> *"They assume more from each other. So that there is really a discussion where that they are involved and they all start saying "we do it that way", "at our place that's how it's done" yes which makes them really involved in the conversation instead of us dictating something like yes, if you have nausea, yes, drink a ginger tea or something like that, but that they really do think along eh?"* (midwives' focus group)

In Belgium, with a high level of recent migrants in the groups, the social support element could be particularly important as some experienced significant social isolation. For example:

> *"Uhm. Yes, I was always uhm, happy. So I always looked up to the sessions, so that was a good sign I guess. Yes, because also. I think also because I myself now uh in my private life uhm don't have much social contact. That that uh does really good for me. (…) That's an advantage for me yes, that I could then uhm. Be myself there. Yes, reasons to be able to talk to other people, because when you go outside you don't have that or when you go to the hospital, you don't have that either."* (woman's interview)

Impact on community building in the longer-term was beyond the scope of this evaluation but shorter-term impact was evident through women's accounts of forming WhatsApp or Viber groups, calling each other for mutual support and meeting up postnatally. For example, this woman, from the UK commented:

> *"We regularly sort of asked each other questions. [one woman] had a c-section previously…so we were asking each other tips of recovery....[It's a] really good support system we have within each other..."* (Woman 2, Focus Group 3)

There were some indications of the potential to foster longer-term social support and community building. This women from South Africa, for example, commented:

> *All the ladies and the nurses they are more of a sisterhood, just a mum to be, we get along fine, and no one is judging anyone that's why I could fit easily" (Interview Mom 2, GR2 May 2023)*

Although postnatal groups were not implemented in this setting, women who gave birth earlier returned to the remaining antenatal groups with their newborns. Similarly, a woman from Kosovo suggested the community building would be lasting:

"We are like friends, for everything we need, when we have problems or we are happy, we always talk with each other. We also sent pictures to one another, pictures of the babies or pictures of us with the babies, or some memes related to parenthood." (women's focus group)

This sentiment was echoed in each focus group with women in Kosovo. Participants explained that they keep in touch with each other through various mechanisms and anticipate their relationships will last well beyond the end of their group care sessions due to the trust and sense of community they built up during their time together.

Peer Learning

Across different settings, participants talked about learning from each other as a positive element of group care. This woman from South Africa, for example, explained:

And I think sometimes when you at home something happens and you think why this happens to me but when you hear and share and someone will say haibo yesterday I did experience something like this then you know it's not something serious, it's something happening to everyone so it's a journey (women's focus group -group 3).

This was echoed by the facilitating midwives. One commented:

"The fact that one lady from another group came with her baby and demonstrated breastfeeding and shared her experience so far helped a lot to ease worries they had" (Cohort 3 self-evaluation form, session 3).

One facilitator commented on how this developed over time as the group became more familiar:

"We achieved what we planned to do and all went well according to plan. Women are very excited and engaging. As expected, we had to answer a lot of questions because it was the first session. While moms can relate to what is going on they need to know what causes it. This being the first group it was difficult to get them talking" (Cohort 3, facilitator 1 self-evaluation form, Session 1).

By session 2 she reflected that things had improved;

"Everything went well. Patients spoke a lot and there was a lot of interaction amongst women themselves. Even though we started 30 minutes late we didn't rush the facilitation we did the best we listened to women carefully and twisted things around as needed" (Cohort 3, Facilitator 1 self-evaluation form, Session 2)."

In Suriname, where involvement of fathers was also prioritised, it was evident that this helped to open up additional areas of peer support and learning. This father, for example, said:

> *"For me it was also the involvement in the pregnancy as a father. There are topics which you usually would not discuss at home. But in group care, it lets you participate as a couple and makes you think: how can we handle that?"*

Although it was not identified as a factor in declining group care during recruitment (most barriers were practical) some women interviewed expressed reluctant to share personal information in the groups. This was most evident, however, in groups where male partners were typically included, as in Suriname. This woman, for example, confided:

> *"I will say it in Sranan Tongo: [...] Mi no wani sma sabi mi tori (I do not want anyone to know my story)."*

In the UK, previous feasibility work had highlighted that although inclusion of male partners was desired, it may affect the group dynamic and feelings of being in a psychologically safe space. Therefore, in the initial group session, women discussed together their views about inclusion and in most cases, partners were involved a little later in pregnancy when the group had 'bonded' and particularly when topics like preparing for birth and early parenting were to be discussed.

Active Participation in Health

Although in some settings (Ghana, Suriname, Kosovo) some system-driven or practical restrictions were placed on women's self-checking component (for example because of limited literacy) the groups in all countries included some element of self-checking for routine screening such as blood pressure and urine testing. In the UK, observers noted that women or women and their partners often helped or checked each other's readings and most recorded their own observations in the notes, with midwives on-hand to provide advice and assistance. This woman, from the UK, commented on how she noticed the impact on her knowledge and confidence:

> *"...when I was in triage because I had a bleed between 20 weeks and 30 weeks. So, I went into triage and then they did my blood pressure. And before the midwife even said, 'Yeah, you're fine. Your blood pressure is normal.' I knew it was."* - *Woman 5, Focus Group 1*

Another woman in the UK interviewed had described how conducting her own urine tests helped her to understand the observations so that she began to see a pattern of gestational diabetes developing herself, before it was formally diagnosed. In South Africa, women commented positively on the learning and

sense of confidence derived from this component. Similarly, in Kosovo women reported enjoying the process of checking their own blood pressure and weight, and the group activities and observations and midwives' comments confirmed this went smoothly, with participants highly active in the sessions. Midwives facilitated various activities they had learnt in the training workshops designed to encourage active participation.

In Belgium, facilitators shared the view that this helped more vulnerable women to access midwifery care and to be more active in in sharing concerns and asking questions. For example:

> *'If you compare it to a standard trajectory of 90% of pregnant (women) actually doing everything prenatally just with the obstetrician and then the 10%. The happy few who find their way prenatally to a midwife. For those 90%, I think that's a very big difference. A Group Care or just being able to sit with the obstetrician eight times for 10 minutes and not daring to start the question list because you feel a time pressure. That's an incredible difference..' (midwives' focus group)*

Active and Interactive learning

Findings were consistent across all countries that active and interactive learning was facilitated in the groups. Most groups were noted in observations to be highly interactive, and both midwives and women and participating partners commented on this, for antenatal and postnatal groups. The analysis of observations of training sessions illuminated the role of the training workshops in supporting this mechanism as the workshops were facilitated in an active and interactive style which role modelled the approach for practitioners. Several commented on how this experience helped the principles to 'click' for them, compared with the more didactic style of care and information giving they were accustomed to providing, and which was often their own prior educational experience.

In a smaller number of groups, the interactive learning style was limited to some degree by features of the implementation which affected the fidelity in practice. For example, in the UK, delays linked to Covid-19 and staffing shortages meant that some groups started many months after the training and some facilitators felt they had lost some confidence with the approach; additionally some of the middle-managers who had been less actively involved with the programme did not appreciate the importance of continuity of facilitator so that staffing rosters were not organized to support consistency of facilitators who were trained and interested to implement the approach. This example also illustrated the importance of readiness for change amongst professionals involved. Despite these limitations, however, the women interviewed from these groups compared the level of interactive learning favourably with their previous experiences of maternity care.

Participants across all countries spoke positively of the interactive nature of the groups and felt it supported deeper and more enduring learning. Women in one focus group discussion in South Africa, for example, commented:

> *"It's an experience, lifetime experience. It is, there's nowhere that you're going to get this information from just going to see a doctor or doing your usual check-ups. So, it's lifechanging"* (Focus Group women, group 1).

> *"And for me as well. It has helped a lot. It's still helping a lot. So, it's a definitely, yes. You will just have it in your mind, in your heart, wherever you go. So, yes, and then, you take that information and you apply it and you go like, guys, it's actually helpful. It will stay forever."* (Focus Group women, Group 1).

> *"Everything. I practice everything. Whatever we have spoken about it grows in my head. When I was in labour, when the water was coming out, what should I do. I check my water, is it normal. It's normal, there's no stains there so I can relax a bit."* (Focus Group women, Group 1).

A participant from Suriname commented:

> *"I did not know anything. [...] It was a big eye-opener for me that I could receive so much more information."*

In the Netherlands a high level of interaction was reported by midwives, and interaction between women in one setting was especially strong during activities in small groups; when midwives did not intervene. Correspondingly, one of the interviewed women explained that this way of working, in particular, facilitated getting to know her peers. However, the observer also noted instances of didactic facilitation (linked to time pressure, discussion content, group responsiveness and group size), which was confirmed by women:

> *Yes, again, things didn't really get off the ground for us. Okay, so it was done interactively, but I thought we were a bit silly, we did the assignment in a sort of neat manner. There was never really a discussion or anything like that. (Woman's interview – site 4)*

The impact of the style of learning, complemented by the time available in group care was reflected in survey responses where the great majority felt they had help and advice (94.6% 'definitely' or 'to some extent'), and felt very or quite well prepared for labour and birth (92%) (tables 5.2 and 5.3)

Table 5.3 Experience of help and advice from providers

Help and advice from a health care provider about baby's health, care and progress (n=258)	**N**	**%**
Yes, definitely	159	61.7
Yes, to some extent	85	32.9
No, and I wanted help/advice	7	2.7
No, but I do/did not need any help/advice	6	2.3
Don't know	1	0.4
I haven't seen a midwife or health visitor since the birth	0	0.0

Note: The sample from Kosovo was updated with later received survey forms after the cross-country analysis was completed so that all-country figures for tables 5.3-5.9 are based on the smaller original Kosovan sample. This reflects services where start of group care was delayed by Covid-19 restrictions and recovery, as well as some institutional delays.

Table 5.4 Feeling prepared for labour and birth

Feelings about being prepared for labour and birth (n=261)	**N**	**%**
Very well prepared	138	52.9
Quite well prepared	102	39.1
Not very well prepared	15	5.7
Not at all prepared	6	2.3

In Belgium, 78.1% reported feeling very or quite well prepared. While this slightly lower rate may reflect the high proportion of migrants in group care, this high rate is suggestive that the care model was effective in informing the women and building their confidence. In Kosovo, no women in group care reported not feeling very or at all prepared, while 7.4% in individual care reported this, but the number of respondents was too small to make any statistical comparison.

Relational continuity

In all countries, for most groups there was continuity of facilitators and of group participants for most sessions. The value of this was reflected in interviews; it also engendered trusting relationships between the participants and between women (and where involved their partners) and the professionals facilitating. This was illustrated by the observations in South Africa which noted that women were comfortable to talk about issues like their struggles to stop consuming unhealthy food and drinks.

Similarly, women talked about the impact on the relationship with professionals:

> *"I feel comfortable in talking with her and expressing how I feel"* (Interview with pregnant mother, South Africa).

In Suriname, participants identified the combination of time for the sessions combined with continuity of facilitator as beneficial. For example:

> *"Because you see them more often and longer in the group, compared to one-one-one care. One-on-one is short: they come to listen to the baby's heartbeat, some questions, and they are gone."*

This quote also illuminates the ways in which time and continuity can change the dynamic of professional-patient communication, which is discussed further below.

In the Netherlands, midwives reported more mixed experience of building relationships and trust, as some felt this was stronger in individual care, given that continuity of care is usual in the midwifery practices; some also found it more difficult to establish group continuity and relationships with asylum-seeking women, who had complex lives and challenges to participate consistently.

Continuity throughout the perinatal journey

A key gap identified in most settings, however, was the lack of continuity throughout the whole perinatal journey. In most settings, the continuity was only applied to antenatal care and some women reflected on dissonance and disappointment in their experience of labour and birth in hospital with professionals not involved with the group care. For example, researchers in South Africa observed:

> .. the things she had learned in group care were not available to her at the referral hospital such as a large ball and gas. She *states, "this group made my pregnancy go quick, it was different than my other pregnancies. I'm just sad that I had to give birth at (referral hospital). The nurses were not you, I was just there to give birth (starts to cry).* (group session observer notes)

This case, and similar example highlighted by some women interviewed in the UK highlights a potential unintended negative consequence of changing the approach to antenatal care if consistent shifts do not take place in other stages of care. In one of the two UK sites, some of the midwifery teams also practice a 'caseloading' continuity of carer model in line with national policy priorities and evidence. In these groups, one of the group care facilitators or at times another midwife in their small team would be on-call for the women's births. As the whole team worked with group antenatal care, even when their own facilitators were not on-call at the time, women would be attended by a midwife from their team with a consistent approach to care. In the Netherlands, in the case of low risk births either at home or in hospital there would be a similar high chance of care from one of the team facilitating the group, but if the woman had increased risk or complications she would have a hospital labour and birth attended instead by hospital-based clinical midwives.

In Ghana, poor antenatal care personnel coverage in this rural region made consistency of facilitators challenging, but the services focused on provided continuity with one midwife facilitator and a mix of co-facilitators.

There is potential also with antenatal and postnatal group care to build relational continuity at least between antenatal and postnatal care, with facilitators and participants. In Suriname, however, for practical reasons these were separate groups, and in the Netherlands, the need to fit with immunisation schedules was viewed as a barrier to continuity through from the antenatal group, since babies could be born at different gestational ages. In the UK site which piloted Parenting Circles, by contrast, the same group shared their antenatal and postnatal group care with consistency of facilitators. Health visitors co-facilitated two of the antenatal sessions and the first postnatal session with a midwife, and then continued to provide the remaining postnatal sessions. Nonetheless, organizational and professional caseload boundaries made this challenging to achieve, despite positive experiences of professionals and parents.

In Belgium, although continuity with hospital care was not part of the model, some participants still experienced an improvement in continuity through the co-facilitator role of hospital midwives and feeling that communication between different areas was enhanced:

> *"And what I also found very nice: I had to go to the hospital once for a control and one of the midwives who had checked me was also one who was involved in the CBGC sessions and yes she had recognized me(...) Yes, I know there are certain ones working with the hospital and sharing information so uh I do find that it gives a sense of trust. For example, I know that my gynecologist knows X (CBGC facilitator) and on a professional level I knew if there was something, they are going to share that information."* (women's interview)

Survey responses confirmed that continuity had been provided (table 5.5) and was meaningful in the sense that participants felt their care providers knew them and remembered their progress.

Table 5.5 Continuity with provider – all countries combined

The midwife remembered you and your progress? (n=365)	**N**	**%**
Yes, definitely	298	81.7
Yes, a little	57	15.6
No, not really	7	1.9
No, not at all	3	0.8
I can't remember/not sure	0	0.0

The comparison with standard care can be illustrated by the case of the UK, where continuity of midwifery carer is a national policy priority yet in the National Maternity Survey for the same year, only where 61% reported mostly seeing the same midwife antenatally, 25% only some of the time and 14% never. Similarly, 54% reported those caring for them always knew their medical history, 35% 'only sometimes' and 11% 'never' (CQC 2023). In the group care survey, 96.2% responded 'yes, definitely' or 'yes, a little', and only 3.8% not. Similarly, in Ghana, 87.4% responded 'yes, definitely' and 11.4% 'yes, a little' with only one respondent selecting 'no, not really'.

Similarly, in Ghana, 95.5% of women felt the midwife 'definitely' knew and remembered them and 4.5% a little, with none responding that they did not.

Engagement and satisfaction with care

Attendance records revealed a good level of attendance, while participant surveys illustrated that if women didn't attend a session, the reasons were usually practical rather than a dislike of the style of care or a view that it wasn't useful (1.5% overall) (table 5.6)

Table 5.6 Reasons for missing group care sessions

Missing sessions/appointments (n=208)	**n**	**%**
I was unwell.	34	16.2
Someone in my family was unwell.	29	13.8
I couldn't stay away from work.	28	13.5
The time was not convenient.	26	12.5
I was on holiday.	22	10.6
I forgot about the appointment.	17	8.2
I had no childcare.	11	5.3
I had no money to travel to the place.	6	2.9
The place was difficult to reach.	5	2.4
I didn't like attending.	2	1.0
Fear of contracting COVID-19.	2	1.0
I decided it was not useful to attend.	1	0.5
Other reasons		
Personal reason	6	2.9
Another appointment to attend	5	2.4
Had no information about the session schedule	5	2.4
Travelling	3	1.4
Hospital emergency	2	1.0
Warm weather	2	1.0
School exams	1	0.5
Partner could not attend	1	0.5

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In interviews in many cases, participants demonstrated great enthusiasm for this style of care, which was also reflected in survey responses where most said they would recommend this form of care to others with only 1.5% disagreeing and 3% neutral. (table 5.7)

Table 5.7 Care recommendation

Recommendation of Group Care to others (n=363)	**N**	**%**
Extremely likely	262	72.2
Likely	84	23.1
Neither likely or unlikely	11	3.0
Unlikely	3	0.8
Extremely unlikely	1	0.3
Don't know	2	0.6

The overall figures reflect some variation across settings but are consistently positive. For example, in Ghana, Kosovo and South Africa, 100% of the survey respondents would recommend this care, while in the UK 89.8% would recommend it. In Kosovo, all survey respondents in group care selected extremely likely while of those in standard care only 23.6% said this was extremely likely and 67.4% likely, with the remainder distributed between neutral or unsure (5.4%) or negative (3.6%). In Belgium, where many participants were migrant women, a similarly high proportion (95.3%) said they would be likely to recommend this type of care.

This woman from South Africa, for example, said:

> *"It was the best idea ever that you guys came to introduce to us. Seriously, we've learned so much from it and getting everyone's experience in it, it's something else. And the tips that we've been getting, guys, I'm telling you, and we are still practicing them, even now, even when the child is born"* (Focus Group women, Group 1).

Similarly, a woman from Kosovo captured the different elements that contributed to her positive feelings about the care, including social support and feelings of empowerment and belonging:

> *"…if it wasn't for this GC, I would not be as strong as I am. Even though my mother and my mother in law helped me very much, it was very different. Time is changing, the system changes as well, that is why I am saying that this group care is the best thing that could ever happen to us. And there was nothing I could not talk about, it felt like home, it felt like I belong here."*

Health professional development and wellbeing

The majority of professionals facilitating the groups were highly positive about the model of care, describing how it was professionally and personally satisfying, as they felt they were providing good quality care, and in an enjoyable way. For example:

> "*For me it is totally different because now you listen to what the client also says. You are listening from their experience, where normally you come and you explain to them. And you - listening to them, really, it really opens up a lot of things because then you can see, but that works. That works*" (Focus group with midwife facilitators, South Africa).

Similarly, midwives in Kosovo described feeling satisfied with the care as they perceived women were more informed through the process, and expressed themselves more in a group setting.

It is important to consider that in implementation projects of this nature, early adopters are often those already predisposed to a change, and organisations which show greater readiness for change, for example because of positive leadership. Positive views may reflect existing predispositions, but being able to practice in the ways considered optimal is also professionally motivating and enabling. This midwife in South Africa, for example, talked about how the facilitators were already 'that type of midwife' but explained that this way of working also enabled them to practice in this way:

> *"So it is either you are that type of person. It is just the structure that we work in does not allow us to practice in this specific manner, but this is who she is. I know. The same goes for XXXX. So it is just like our normal day-to-day"* (Focus group with facilitators, South Africa).

Nonetheless, the process of involvement was found to enhance professional engagement and satisfaction with group care. Although in some settings there was some hesitance about women self-checking for routine screening, midwives were able to observe benefits in practice; for example, in women's engagement and health knowledge:

> *"It is a positive. ……. and in the urine room for the second time, they cannot even wait for me to give the stick to them just to put it in their urine and I will just hold the bottle and say now you can see for yourself. It is like normal, or the colours has changed … They were so excited if the colour did not change, né…..the one had Leucocytes in their urine. Sister, I think I did something wrong. I think my wiping was wrong. I wiped from the back to the front which I were not supposed to do. Now I will go back from the front to the back. So, I did not say anything. You see" (Facilitator 1 & 2, FG discussion South Africa)*

Similarly, midwives in Belgium commented on being more familiar with a didactic approach to care so that they needed to go through a transition in their style of working, which they found positive:

> *"I do think there is an incredible amount of attention, that it comes from themselves, and it has taught me a lot for my reality as a midwife at home and to let it come much more from the people. I do notice that I want much less from myself and that I ask much more what do you think, and I do think that's better."* (focus group with midwife facilitators, Belgium)

A specific feature of group care facilitation was co-working with other professionals, whereas most had been used to working alone in individual care. Midwives in Ghana described finding the prospect of working together quite daunting but changed views based on practical experience. For example:

> *'It was something that though I was not happy with it, but later I realised that it is helpful. Yeah, it's… Any time you want to have something with another colleague, there's nothing to stop you, just move straight and you'll be able to have that eye contact with all your colleagues."* (midwife interview)

In the Netherlands, midwives usually looked back at a positive experience after completion of a group. Yet, midwives also reported higher workload, taxation on their energy level and disparate experiences regarding HCP-client relationship. During a lively discussion one midwife reflected on habituation with the new role:

> *"I think you're making your own role too important. Then you feel the need to have that contact with them. Instead of conversations with you, they have conversations with pregnant women and they can share a lot with each other, so I think that has so much added value, but it may take some getting used to for yourself, because you indeed build up that personal part less. But I think what they get in return is really valuable."* (midwives' focus group, Site 2)

In Belgium, midwives also expressed some nervousness about co-working in this way but eventually embraced it, and also found it supportive in practice:

> *"I have to say I was a bit anxious. Is everything okay, am I doing the right thing? And then my colleague who then has the same knowledge or more knowledge. That's exciting. But I have to say indeed that that is all very nice and it goes very organically."*

"The first groups that I was like what are we actually doing here? Is that really any use here? And then I think it's nice to have someone. Or sounding board indeed that you're not alone." (midwives' focus group)

Although they found co-working with a midwife easier to adapt to, from experience they valued co-facilitation with the social workers, who could provide complementary skills in social support. Additionally, since midwifery in Belgium (and similarly in the Netherlands) is not integrated in practice between primary/community and hospital-based care, adapting to co-facilitating with hospital midwives was planned. Belgian hospital midwives viewed this as beneficial, bringing together different areas of expertise and experience but this collaboration did not work in practice in the Netherlands.

In the UK, midwives adapted to working together readily, even though the experience was very unfamiliar. In the Parenting Circles in Site 1, midwives and health visitors collaborated, which is very unusual in this setting and when interviewed both professions valued learning about each other's work and enhancing the communication and continuity between maternity care and longer-term parent-child support. Midwives in both settings, despite the very different contexts, described facilitating group care as hard work but professionally rewarding. One midwife from Ghana, for example, described how the relationships with women in the group helped them to provide advice that was sensitive and trusted when complications arose, and referral was needed.

As reported in Chapter 4, the style of the training was experienced as supportive because it modelled the group approach, with active and interactive learning and peer support. Midwives in a focus group followed training workshops in Ghana reflected on how they themselves learn, and the difference between deeper learning with an interactive approach, and just being given information, contrasting this favourably with their own educational experiences. The training helped them to relate the principles of group care to their own reflections on how learning works best for health professionals too.

Midwives in Ghana also valued the use of the Check2Gether kit, although they also had various suggestions for improvement in design and reliability. They reported that a particular benefit was that tests which women previously had to pay for in less accessible facilities were available in the group, reducing travel and time burdens as well as costs for women, and helping the midwives to achieve more timely referrals when needed.

It is important to note, however, that while working in this way was experienced positively by most facilitators, the work involved in implementing and sustaining a new model was considerable and could be a source of stress. Facilitators needed to navigate systems not designed to support this way of providing care, professional hierarchies or boundaries, learn and embed new skills and ways of

collaborating. In addition, the work involved in recruitment in the context of an evaluation and with communities unfamiliar with the model was considerable. Continuation of groups in this context reflected the professional rewards of the approach.

Empowerment

Empowerment, like the group learning approach, was an interactive matter. The impact of working this way on professionals described above was reflected in their increasing confidence in sharing information and decision-making with parents. For example, this woman in South Africa said:

> *"I appreciated the way they (facilitators) conducted the discussions. I just felt so much love. I felt like they cared about me with everything they were saying. They also asked us what our opinion is, what we think. We felt very involved in the conversations and that was* very nice" (Focus Group women, group 3).

The iterative nature of this process of change was illustrated in this setting by other comments; for example, this woman described how the interaction helped to reduce hierarchy and increased her confidence to speak up:

> *"For me personally, because of the group and after our discussions here, it actually made me feel more comfortable to speak to the midwife as well because you have got that sense of comfort here. You were able to also take that into your personal space with the midwife. Also because the midwife is a part of the group. She understands your story also, I would say. It makes it easier for you to, when you are alone with her to also ask questions and whatever. But if I wasn't a part of the group, then I wouldn't have that comfort to ask her certain questions as well. She probably also wouldn't be maybe as straightforward"*
> (Focus Group women, Group 4).

The facilitating midwives appreciated and honed the power of listening as they observed the impact of interactive learning in practice:

> *"For me it is totally different because now you listen to what the client also says. You are listening from their experience, where normally you come and you explain to them. And you - listening to them, really, it really opens up a lot of things because then you can see, but that works. That works" (Focus group with midwife facilitators, South Africa).*

Another facilitator continued:

> *"They feel that whatever they are going to say is going to be valued. They feel that they are being seen. ..... and so, they are not just another number. So, I think that is what makes them*

just be comfortable within themselves; they are just not another pregnant person. I am actually [Name] and what I have to say it brings value to the table because here I have health professionals that are listening to me, and we can talk. I can have a conversation about my care. And like she said as time has gone throughout now, getting to the point where she is pregnant, she can literally say those words. I am the boss. I know what I am doing."
(Focus group with midwife facilitators)

These midwives also spoke about how, in this process, they were learning from the women too.

In Kosovo women felt that the increased information they had gained increased their confidence when visiting the gynecologist, and more able to ask them questions and one commented on the positive response from her gynecologist to her increased knowledge. This was also echoed in Belgium, where many participants were migrants who may have previously lacked confidence in navigating the health system. For example,

"I also feel like in these sessions that you have the strings in your own hand. And that you can give more of your own direction of "I want to know that" or "I don't want to know that", "I want to ask this question". I think that in a hospital, the doctor or the midwife has to control the strings themselves. And I don't like that as much. I want to know more myself or steer myself a bit. Yes, of what's in front of me and so on. And not that doctor or the midwife only asks me questions, does things and then I return home and on the way I could always think "oops but I was going to ask this and ask that" and then it stops there because you can't return because your appointment is over. But here I feel like I can still always go to X (facilitator) or we have WhatsApp group. Ask something in general. Yes, I think that's the positive thing about it."
(woman's interview)

In one woman's case, given the context described in Chapter 3 that midwifery antenatal care is not normalised in Belgium, this sense of empowerment was reflected in feeling able to assert her care choice to the obstetrician:

"But I now think that my obstetrician herself thought it was a bit weird that I am only being followed up at CBGC. She said "why are you choosing that now? and why not here?". She was actually not open to this idea. That was also the case, that you have to, you actually have to have good arguments. I then thought "But actually that's my choice". So yes, they can't decide on that like "You have to do it (follow-up) here or there". But I did have the feeling that they didn't like that, I guess." (woman's interview)

Although in many countries and maternity systems, the principle of maternal autonomy or choice is not well established, the impact of group care on empowerment was also reflected in survey responses. In terms of opinions about decisions during labour (table 5.8) 45.9% felt they should be in control and 27.2% expected a more shared approach, while only 25.7% felt staff should make the decisions. In Kosovo, in a social context where women are not familiar with being able to be in control of decisions in childbirth 64% of women in group care felt they should be fully in control of decisions, while 21.8% in the individual care group felt this; in both groups, a similar small proportion (16%) felt this was the professional's responsibility, not the woman's

Table 5.8 Sense of Control

Opinion about decisions during labour (n=257)	**N**	**%**
Staff should just get on with it, that's their job	19	7.4
Staff should get on with it, but tell me what decisions they have made	47	18.3
My views should be asked for and respected as far as possible, but staff should have the final say	70	27.2
Staff should give me their assessment of the situation, but I should still be in control of the decisions	118	45.9
Don't know	3	1.2

The variation in norms and expectations and countries is illustrated by the contrast between Ghana, where only 2.8% of survey respondents felt they should have control of decisions, and the UK, where 78.3% felt they should have ultimate control. In Belgium, where the majority of participants were migrants, 31.8% felt they should be in control, and 40.9% selected shared decisions, which is suggestive of a high level of empowerment considering that many will have come from countries where choice and control for patients is not typically supported by the health system.

The Pregnancy Related Empowerment Scale (PRES) was developed by Klima et al (2015) for use in evaluations of group care to assess impact on empowerment (table 5.9).

Table 5.9 Pregnancy Related Empowerment Scores

What is the response that best describes how you feel? (n=364)	Strongly agree		Agree		Disagree		Strongly disagree	
	N	%	N	%	N	%	N	%
I can ask the antenatal care provider anything about my pregnancy	289	79.5	71	19.6	2	0.6	1	0.3
I have enough time with the antenatal care provider to discuss my pregnancy	256	70.7	93	25.7	12	3.3	1	0.3
The antenatal care provider listens to me	285	78.5	74	20.4	3	0.8	1	0.3
The antenatal care provider respects me	296	81.5	66	18.2	0	0.0	1	0.3
I expect the antenatal care provider to respect my decisions about my pregnancy	216	59.4	102	28.0	42	11.5	4	1.1
The antenatal care provider respects my decision, even if it is different than her/his recommendation	184	50.8	98	27.1	72	19.9	8	2.2
I take responsibility for the decisions I make about my pregnancy	253	70.2	100	27.7	8	2.1	0	0.0
I can tell when I have made a good health choice	198	54.9	142	39.3	21	5.8	0	0.0
Since I began antenatal care, I have been making more decisions about my health	171	47.2	163	45.0	27	7.5	1	0.3
Women need to share experiences with other women when they are pregnant	207	57.3	105	29.1	35	9.7	14	3.9
I share my feelings and experiences with other women	175	48.3	127	35.1	54	14.9	6	1.7
I have a right to ask questions when I don't understand something about my pregnancy	272	75.1	85	23.5	4	1.1	1	0.3
I am able to change things in my life that are not healthy for me	230	64.1	120	33.4	6	1.7	3	0.8
I am doing what I can to have a healthy baby	275	76.4	84	23.3	0	0.0	1	0.3
If something is going wrong in my pregnancy, I know who to talk to	263	73.1	81	22.5	13	3.6	3	0.8
I have enough personal attention from my health care provider to meet my needs	214	60.3	125	35.2	13	3.7	3	0.8
When I weigh myself, I know if I am gaining the right amount of weight during my pregnancy	156	43.6	142	39.7	52	14.5	8	2.2
Women in the group listen to me	236	65.6	115	31.9	6	1.7	3	0.8
Taking my own blood pressure helps me to know if my blood pressure is normal	171	48.8	143	40.7	31	8.8	6	1.7
Average PRES score (n=364)	**3.55 (SD=0.37), Min=1.79, Max=4.00**							

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The mean PRES score across all countries was 3.55, suggesting a high level of empowerment. Very few respondents strongly disagreed with any of the statements, and those where a slightly higher proportion disagreed included provider respect for their decisions, even if not in line with their recommendations, sharing feelings and experiences with other women, and knowing whether they were gaining the right amount of weight. Uncertainty about weight management in pregnancy is widespread as those with high BMI are usually categorized as high risk and maintaining healthy weight is a common worry. The findings on staff respect reflect perhaps the fact that professionals do typically expect women to follow their advice and worry about their own responsibility in the event of care outside guidelines. The response in relation to sharing feelings with other women, although the majority felt able to do this (83.4%) indicates that not all women will feel safe and comfortable to share within a group; it may also reflect lack of relational continuity in some groups, or presence of male partners. For example, in Suriname, midwives and women had expressed some concerns about sharing information about themselves with male partners present. In Belgium, where the majority of participants were from a migrant background, scores were similar to overall average at 3.66 (SD 0.39) suggesting that the impact is applicable to a range of participant backgrounds. In Kosovo, the mean score for women receiving group care was 3.93 and for the control group in standard care 3.41.

Concluding Points

The analysis of mechanisms of effect showed strong consistency across country settings despite considerable contextual differences and were found to be resonant in high and middle or lower-middle income contexts and across varied health systems. While there were adaptations to context, the analysis of fidelity showed overall good levels of fidelity with the core components of group care and this was echoed in the analysis of care experiences, which were generally concordant with existing theories on mechanisms of effect. Implementing a new model of care is challenging, typically creates additional work and may engender tensions; this was more evident in countries without established midwife-led antenatal care yet in all countries, the analysis highlighted that professional development and satisfaction, and relational continuity may an important contributor to the benefits of group care that has been less discussed in existing literature on group care.

CHAPTER 6 – COSTS AND ECONOMIC IMPLICATIONS OF IMPLEMENTING GROUP CARE

In implementing group care, three stages with specific cost components can be distinguished. The three stages are the design phase, initiation phase and maintenance phase. In this chapter an overview of the costs of these different phases is given for the countries participating.

This overview is based on information provided by the different countries, including staff time and costs for organising training for professionals and group sessions for antenatal and, in some countries, postnatal care. Staff time is valued at the gross salaries of the professionals involved, representing the opportunity cost to the professionals of providing group care rather than usual care. In addition to personnel costs, other costs include travel costs for trainers and professionals, costs of venues for training and group care sessions, costs of food and beverages, and costs of equipment and materials. The country managers provided overviews of the time spent by health professionals and the other costs using the templates provided (templates can be provided for information on request to the GC_1000 evaluation team). For the sake of comparability, this chapter presents costs in euros. Current exchange rates have been used. However, for some countries these exchange rates are very unstable. Local currencies have therefore been used in the country evaluation reports.

6.1 Design phase

In the design phase the group care model has to be adapted to the specific situation and the necessary (financial) infrastructure has to be established.

Activities in this phase reported by the countries are e.g. obtaining relevant permissions, setting up steering committee and implementation team, adaptation and translation of materials, and staff selection.

6.2 Initiation phase

The initiation phase consists of training professionals, building or adapting avenue and purchasing equipment to provide group care. These costs can be incurred at different levels. Typically, training costs are incurred at a central level and other expenses are site-specific.

In this project, training of professionals was provided by Group Care Global as part of WP4 and consisted generally of two days of training. In some countries, such as the UK, this was reduced to a one-day workshop because staff shortages meant difficulty in releasing staff time for training. The cost of training consisted of the cost of the (international) trainers including their stay and travel, cost of participating health professionals, and other costs such as costs for the training venue, the food and the materials needed. In Table 6.1 an overview is given of the cost of training per participating health professional for the different countries.

Table 6.1. Cost of training professionals in initiation phase (in €) per health professional trained (n is number of health professionals trained)

	Belgium *n=13*	Ghana *n=24*	Kosovo¶ *n=15*	Netherlands¶¶ *n=24*	South Africa *n=30*	Suriname *n=39*	United Kingdom† *n=36*
Cost of trainers							
-stay & travel	59	318	644	0	491	241	41
-time cost*	1175	426	1481**	1325	1126	477	526
Cost of participants							
-stay & travel	0	21	45	65	0	9	0
-time cost**	457	28	145	1226	159	24	158
Other costs							
-material	11	9	47	67	10	0	11
-venue & food	73	13	114	167	17	6	22
Total cost per trainee	**1775**	**814**	**2475**	**2849**	**1803**	**757**	**757**

¶ Including initial and refresher training

¶¶Including initial training and 3 feedback sessions

* Time costs of trainers as reported by Group Care Global

** Including time of translator

*** Time costs of participating health professionals is calculated by multiplying the time needed for training by their gross hourly salary

† One day training

Training cost differed by country, mainly caused by number of participating health professionals, their local gross salary and duration of training (in general 2 days, but in United Kingdom 1 day) and inclusion of refresher training (Kosovo) or feedback sessions (Netherlands).

Table 6.2. Initial cost of providing group care per site (in €)

Country	Belgium*	Ghana	Kosovo	Netherlands	South Africa	Suriname	United Kingdom
Initial costs per site	830	706	265	200	159	704	303

* Next to these one-off costs there are yearly costs of €466 for printing materials, software and licenses, and mobile phones at the site-specific level

Initial cost per site varied from €0 to €830 between the countries, mainly depending on the content, and consisted of one-off cost for equipment and materials to provide group care such as blood pressure monitors, dopplers, stethoscopes, digital personal scales for mothers and babies, activity box with items for interactive education such as flash cards on different topics, beads, yes/no signs, etc, flipchart board, tables and chairs, storage boxes and social media cost, pillows, mats, and small materials.

6.3 Maintenance phase

Costs in the maintenance phase include ongoing training and monitoring at the central level and conducting group care sessions at the site-specific level.

In the maintenance phase, training of health professionals would likely be done by in-country trainers. For several countries the cost per trainee was assessed if in-country trainers are providing the training instead of the initial Group Care Global trainers. This resulted in considerably lower costs per health professional trained. Costs are still relatively high in the Netherlands. Here, training courses are provided by a central organisation (CenteringZorg) with the aim of guaranteeing and securing the quality of the Centering model. This is also necessary in order to receive the (higher) reimbursement for group care from health insurers. In addition, the training includes three two-hour feedback sessions and the salaries of the midwives in the Netherlands are relatively high.

Table 6.3. (Expected) cost of training professionals in maintenance phase (in €) per health professional trained by local trainers

Country	Belgium	Ghana	Kosovo	Netherlands¶	South Africa	Suriname	United Kingdom
Total cost per trainee	n.a.	n.a.	n.a.	1113-1944	464	64	244

n.a. not available

¶Including initial training and 3 feedback sessions

Table 6.4. Cost of conducting antenatal group care sessions per pregnant women (in €)

	Belgium *n=57*	Ghana¶	Kosovo *n=31*	Netherlands *n=65*	South Africa *n=20*	Suriname *n=26*	United Kingdom *n=72*
Cost of health professionals							
-travel cost	5	18	0	0	0	0	0
-time cost†	309	4	17	236	54	15	200
Other costs							
-material	0	0	6	5	8*	32	0
-venue	25	0	0	0	0	34	0
-refreshments	24	0	14	8	6	21	0
Total	**364**	**22**	**37**	**249**	**68**	**102**	**200**

¶ Group care without Check2gether

† Time costs of the health professionals providing group care, calculated by multiplying the total time required for the group care sessions by the number of health professionals providing group care and their gross hourly salary

* These material costs relate to gratuity vouchers (which will not be provided outside the study setting)

Cost of antenatal group care per pregnant woman differed by country, mainly due to number of group care sessions, number and type of health professionals facilitating and their local gross salary, and number of pregnant women per group. Furthermore, there are differences in the other costs, e.g. whether a venue has to be paid for or refreshments were offered. Number of pregnant women per group, as described in previous sections, was often lower than the planned size because of recruitment challenges post-Covid and with a new model of care that is not routine. Therefore, understanding the cost per

pregnant woman or per parent-child dyad is important to plan potential costs of providing group care in the future if embedded and scaled up further.

Table 6.5. Cost of conducting postnatal group care sessions per parent-child dyad (in €)

	Belgium	Ghana	Kosovo	Netherlands *n=20*	South Africa	Suriname *n=52*	United Kingdom *n=32*
Cost of health professionals							
-travel cost	-	-	-	0	-	12	0
-time cost†	-	-	-	160	-	40	218
Other costs							
-material	-	-	-	0	-	23	0
-venue	-	-	-	0	-	19	0
-refreshments	-	-	-	8	-	7	0
Total				**167**		**100**	**218**

†Time costs of the health professionals providing group care, calculated by multiplying the total time required for the group care sessions by the number of health professionals providing group care and their gross hourly salary

6.4. Other cost considerations

Table 6.6. Comparison with individual care: hours and cost (in €) of antenatal care received per pregnant woman

	Belgium	Ghana*	Kosovo	Netherlands	South Africa	Suriname	United Kingdom*
Hours of antenatal care received per pregnant woman							
-group care	15.5	10.3	17.0	22.3¶	12.0	20.3	16.2
-individual care	n.a.	n.a.	2-3	4.8	2.2	n.a.	4.0
Cost of antenatal care received per pregnant woman (in €)							
-group care	364	n.a.	37	308	68	102	200
-individual care	n.a.	n.a.	n.a.	272	54	n.a.	111

n.a. not available
¶Including additional individual antenatal healthcare use
*including one postnatal group session

Compared to individual care group care usually results in more than four times the number of antenatal care at less than twice the costs. This calculation includes in some settings (e.g. UK, Ghana) a single postnatal group for parents to meet for postnatal care, discussions and peer support and to close the care episode, provided in addition to usual individual postnatal care.

Table 6.7. Comparison with individual care: hours and cost (in €) of postnatal care received per parent-child dyad

	Belgium	Ghana	Kosovo	Netherlands	South Africa	Suriname	United Kingdom
Hours of postnatal care received per parent-child dyad							
-group care	-	-	-	16.0	-	17.7	17.0

-individual care	-	-	-	4.0	-	n.a.	n.a.
Cost of postnatal care received per parent-child dyad (in €)							
-group care	-	-	-	167	-	100	218
-individual care	-	-	-	124	-	n.a.	n.a.

n.a. not available
- not applicable

Postnatal group care was also implemented in several countries – Suriname, UK and The Netherlands. In The Netherlands and Suriname this group started only after birth, while in the UK, this was an integrated ante and postnatal model, so the provided hours in the table cover both ante and postnatal care, with continuity of the group participants and facilitation by health visitors and nursery nurses as well as midwives.

Cost for women

Group care can also affect the costs incurred by pregnant women and their families. These include travel costs, time costs and other costs such as care for other children. Most countries describe that travel costs do not differ as group care takes place in the same place as individual care or in a place closer than individual care (Belgium). Regarding care for other children, this is not an issue in most countries, e.g. because childcare in a country is usually provided by family relatives. However, in other countries such as Belgium finding childcare was cited as a barrier to attending group care.

Countries often mention the lack of waiting time in group care, as starting times are fixed compared to individual care. While some women were reported to have declined group care because of the longer time of the visits and being released from work, even in countries with legal right to paid maternity leave, others commented that the time taken is no longer in practice as the groups tend to start and finish on time, compared with often long waits in antenatal clinic for a short individual visit with a midwife. However, it was not possible to quantify the waiting time for women in standard care as it is usually not recorded and may be highly variable.

Concluding Points

The analysis shows that costs can vary considerably between countries and depend on many variables such as duration of training and training provider, inclusion of supervision, number and duration of group sessions, number of women per group, number, cadre and gross salary of health professionals providing group care and co-facilitators. In addition, cost-effectiveness of care needs to be considered by any country planning to implement group care, taking into account available evidence on impact. Further to this, consideration is needed of the potential differences between costs of a pilot scheme or early implementation and those of an approach to care which is scaled-up and fully embedded in a service, with training also incorporated in routine provision.

To enable services to model the cost implications of different size of groups and other characteristics such as number and type of trainers, and number and duration of group sessions costing tools are provided in the GC_1000 Toolkit (D6.3) and at the following links:

Calculating the costs of implementing Group Care EXCEL TOOL 1

https://zenodo.org/records/11638812

Calculating site implementation costs of Group Care EXCEL TOOL 2

https://zenodo.org/records/12586674

CHAPTER 7 – INDICATORS OF HEALTH AND WELLBEING IMPACT

This chapter presents and discusses findings in relation to the measurable impact of this model of care on health outcomes in the demonstration sites across each country context. It discusses impact in relation to physiological and psychological health outcomes. It is important to note that as this study was designed for a primary focus on understanding the process and needs of implementation, this is not an experimental study designed to understand the potential outcomes of this model of care and the implementation context precluded use of random allocation or controlled comparisons. Instead, we use a realist evaluation framework to gain an understanding of 'what works for whom, in each context'. Where available reliably, data from national or local routine data systems or surveys, and any previous experimental or controlled studies of group care in the setting have been used to contextualise the data.

Mode of Birth

Across all countries, rates of normal vaginal birth were 58.8%, with a combined caesarean rate of 29% (table 7.1). Rates of caesarean delivery vary widely internationally, with problems of excessively high rates as well as low rates that cause harm inequitably within and between countries (Boerma et al. 2018; Sandall et al. 2018). Existing trials and cohort studies of group care have not indicated any significant changes in rates with group care and the descriptive findings here are consistent with this wider evidence. Group care does not extend into intrapartum care, and in relation to the findings reported about decision making and feeling informed and prepared, these findings suggest that other factors relating to the way intrapartum care is delivered are more influential in relation to mode of birth than antenatal preparation or support. Mode of birth in the UK sample, for example, was similar to rates measured in the national maternity dataset: group care 38.7% CS, national rate 40%; local rate site 1=40%, site 2=38%). (NHS Digital MSDS 2023). In contrast, mode of birth in women participants in this very rural district of Ghana was 7% CS, 1.4% forceps and 91.6% normal vaginal birth.

Most countries did not have a control group available. In Kosovo, the rate of normal vaginal birth in group care was 54.2% and in standard care 54.5%. While this is suggestive of no impact, the demographic information shows a higher proportion of multiparous women in the control group – population rates of vaginal birth are higher in those who have given birth and operative or caesarean births lower. In addition, the sample numbers were small and lacked other controls so no clear inference would be possible. In South Africa, in public hospitals, caesareans accounted for 28.8% of all births between 2020 and 2022. In private sector hospitals the rate is 75% (Saving Mothers Report, 2022).

Table 7.1 Mode of birth

Mode of birth	Normal vaginal n. (%)	Forceps/vacuum n. (%)	In-labour CS n. (%)	Planned CS n. (%)
UK	67 (43.3)	28 (18.0)	26 (16.8)	34 (21.9)
Ghana	65 (91.6)	1 (1.4)	1 (1.4)	4 (5.6)
Belgium	17 (70.9)	2 (8.3)	2 (8.3)	3 (12.5)
Netherlands	18 (56.3)	7 (21.9)	6 (18.8)	1 (3.1)
Suriname	Not available	Not available	Not available	Not available
Kosovo	13 (54.2)	0 (0.0)	8 (33.3)	3 (12.5)
South Africa	8 (53.4)	2 (13.3)	0	5 (33.3)
all	188 (58.8)	40 (12.5)	43 (13.4)	50 (15.6)

Coping during birth

Feelings reported in the survey about coping during birth, where 88.8% felt they had coped very or quite well (88.8%) (table 7.2) suggest that feelings of being informed or prepared are reflected in a positive birth experience. Wider evidence shows that appraisal of birth experience is important and may be positive even when interventions are needed if women feel well prepared and supported (Ford & Ayers 2011).

Table 7.2

Feeling about coping during labour and the birth (n=260)	**N**	**%**
Very well	123	47.3
Quite well	108	41.5
Not very well	24	9.2
Not at all well	5	1.9

Note: The sample from Kosovo was updated with final survey forms after the cross-country analysis was completed so that figures for tables 7.2-7.6 include the smaller original Kosovan sample..

Previous trials and cohort studies have indicated reductions in preterm birth for more vulnerable populations with group care. Only the UK were able to obtain local and national data on gestational age at birth and birthweight, showing that 6 babies (4.3%) were born prematurely and 95.7% at term (37-42 completed weeks) (table 7.3).

Mean birthweight was normative at 3365g (SD 517) (table 7.3). National data for 2022 showed that 90.9% of babies in England were born at term, 7.2% prematurely and 0.2% at 42+ weeks (National Maternal and Perinatal Audit Clinical Report 2022).

Table 7.3

GA at birth	**(n=141)**	
33+0 ≤ 36+6	6	4.3
37+0 ≤ 37+6	9	6.4
38+0 ≤ 38+6	27	19.1
39+0 ≤ 39+6	50	35.5
40+0 ≤ 40+6	36	25.5
41+0 ≤ 41+6	13	9.2

Birth weight at birth	**(n=142*)**
Average (SD)	3,365 (517.3)
Min-Max	1,575-4,855

*Includes twins

Across all countries, rates of admission to any level of neonatal unit were 14.2% (48 babies). Data on length of stay were not available for almost half of cases, but of the remainder, 39% were admitted for 2 days or more. In Ghana, admission rate was 4.1% while in the UK this was 10.4% for the sample; however national and local statistics on admission rates are not published.

Stress in Pregnancy

Social support is known to form an important buffer against negative health consequences of chronic stress and may support overall psychological wellbeing. The Pregnancy Related Distress Scale was designed to assess level of common worries in pregnancy. Findings across all countries are shown in table 7.4. Mean score was 10.2 (SD 6) with responses ranging from no worries to a very high level. The mean score was lower than those found in a recent UK sample (mean 13.89 Pope et al. 2022), suggesting lower levels of worry, but data from other countries or control groups would be needed for valid comparison. The highest worry scores overall were in relation to what will happen during labour and birth, and labour and birth pain, while lower levels were found for quality of antenatal care, effects of substances taken on the baby and changes in relationships after the baby is born.

The Warwick-Edinburgh Mental Wellbeing Scale is a measure of psychological wellbeing used in a number of maternity-related studies internationally. We used the short item version of the scale. Overall findings are shown in table 7.5. Mean score before birth was 28 (SD 4.1) and postnatally 27.5 (SD 4.5). SWEMWBS has a mean of 23.5 and a standard deviation of 3.9 in UK general population samples (Ng Fat et al. 2016, 2017). This means 15% of the population can be expected to have a score >27.4 and 15% below 19.6 so these are described as markers for high or low wellbeing but we were not able to locate reference figures specifically for perinatal wellbeing. In the UK sample the mean score was 26.6 (SD 3.7) antenatally and 24.8 (SD 5.1) postnatally. Scores in Belgium were consistent at a mean of 28, supporting the suitability of this form of care for women from migrant backgrounds. In Kosovo, mean scores in group care were 30.7 (SD3.1) antenatally and 29.4 (SD3.7) postnatally in those receiving group care, and in the control group 29.4 (SD3.7) and 28.9 (SD4.9) respectively.

Table 7.4 Pregnancy Related Distress Scores

At this point in your pregnancy, how bothered, upset or worried are you about… (n=362)	Not at all		Some-what		Very much	
	N	%	N	%	N	%
Taking care of a newborn baby	162	44.8	155	42.8	45	12.4
The effect of ongoing health problems such as high blood pressure or diabetes on your pregnancy	248	68.5	85	23.5	29	8.0
Feeling tired and having low energy during your pregnancy	133	36.7	177	48.9	52	14.4
Pain during labour and birth	88	24.3	181	50.0	93	25.7
Changes in your weight and body shape during pregnancy	191	52.8	122	33.7	49	13.5
Whether the baby might come too early	192	53.1	112	30.9	58	16.0
Physical symptoms of pregnancy (such as vomiting, swollen feet, or backaches)	167	46.2	142	39.2	53	14.6
The quality of your antenatal care	264	72.9	73	20.2	25	6.9
Whether you might have an unhealthy baby	159	43.9	149	41.2	54	14.9
Changes in your relationships with other people due to having a baby	252	69.6	89	24.6	21	5.8
What will happen during labour and birth	92	25.4	174	48.1	96	26.5
Working or caring for your family during your pregnancy	177	48.9	139	38.4	46	12.7
Paying for the baby's clothes, food, or infant care	234	64.6	93	25.7	35	9.7
Working at a job after the baby comes	179	49.5	125	34.5	58	16.0
Getting day care, babysitters, or other help to watch the baby after it comes	183	50.5	127	35.1	52	14.4
Whether the baby might be affected by alcohol, cigarettes, or drugs that you have taken	331	91.4	18	5.0	13	3.6
Average NuPDQ Score (n=362)	**10.2 (SD=6.0); Min=0.0; Max=30.0**					

Table 7.5 Warwick-Edinburgh Mental Wellbeing Scale (short-form) scores

How you have been feeling over the last 2 weeks? **Before birth (n=346)** **After birth (n=250)**	**All of the time**		**Often**		**Some of the time**		**Rarely**		**None of the time**	
I've been feeling optimistic about the future.										
Before birth	125	36.1	164	47.3	50	14.5	4	1.2	3	0.9
After birth	85	34.0	114	45.6	41	16.4	6	2.4	4	1.6
I've been feeling useful.										
Before birth	128	37.0	142	41.1	69	19.9	6	1.7	1	0.3
After birth	102	40.8	97	38.8	42	16.8	8	3.2	1	0.4
I've been feeling relaxed.										
Before birth	103	29.8	111	32.0	109	31.5	20	5.8	3	0.9
After birth	40	16.0	83	33.2	94	37.6	25	10.0	8	3.2
I've been dealing with problems well.										
Before birth	80	23.1	154	44.5	99	28.6	10	2.9	3	0.9
After birth	51	20.4	96	38.4	86	34.4	14	5.6	3	1.2
I've been thinking clearly.										
Before birth	108	31.2	154	44.5	76	22.0	6	1.7	2	0.6
After birth	86	34.4	92	36.8	62	24.8	9	3.6	1	0.4
I've been feeling close to other people.										
Before birth	122	35.3	128	37.0	70	20.2	24	6.9	2	0.6
After birth	80	32.0	92	36.8	60	24.0	14	5.6	4	1.6
I've been able to make up my own mind about things.										
Before birth	143	41.3	150	43.4	45	13.0	7	2.0	1	0.3
After birth	97	38.8	111	44.4	32	12.8	7	2.8	3	1.2
Average SWEMWEBS Score before birth (n=346)				**28.0 (SD=4.1); Min=17; Max=35**						
Average SWEMWEBS Score after birth (n=250)				**27.5 (SD=4.5); Min=14; Max=35**						

Breastfeeding Rates

Breastfeeding rates are a good indicator of health literacy and maternal self-efficacy and have been shown to be increased in recent RCTs of group antenatal care (Jans et al. 2023). Rates across all countries are shown in table 7.6. These indicate high overall rates of initiating and sustaining breastfeeding. There is wide international and socioeconomic variation in rates of breastfeeding. For example, in the UK, the rates of initiation and sustaining exclusive breastfeeding reported in the women receiving group care were 63.4% and 41.4% respectively, while latest national maternity survey (CQC 2023) showed rates of initiation of 52%. In Ghana, where prevalence of breastfeeding is higher, rates of initiation of 86.7% and continuation of 80%.

Table 7.6

Type of milk the baby had	**First few days after the birth (n=256)**		**At the time of the questionnaire administration (n=255)**	
	N	**%**	**N**	**%**
Only breastmilk	184	71.9	156	61.1
Breast AND formula milk	55	21.5	53	20.8
Only formula milk	17	6.6	44	17.3
Other type of milk	0	0.0	2	0.8

CHAPTER 8 – DISCUSSION OF FINDINGS

This was an implementation-focused study using a realist evaluation design and mixed methods to understand the process of implementing group care across a diversity of country and local settings, including barriers and facilitators, the preparation and support and any contextual adaptations needed, the experiences of providing and receiving care in this model, exploring common or divergent themes and relating this to the fidelity of the implementation. The evaluation also identified service costs, key clinical and psychological outcomes associated with group care. Where available these were contextualised in relation to routine or research data on costs and outcomes to identify economic and public health implications of implementing the model across different country settings. Based on the analysis of experiences we also explored the mechanisms of effect of group care across the different settings and synthesised the findings to build context-intervention-mechanism models to address the question of 'what works, for whom, and in what contexts'.

Context – facilitators and barriers to implementation

Chapter 3 analysed data relating to contextual influences on and process of implementation, drawing on findings of a Rapid Qualitative Enquiry (WP2) and identification of appropriate adaptations or measures to support implementation (WP3). These were synthesised using the CFIR framework and contributed to the GC_1000 Lessons-Learnt report (WP6).

Despite a range of contextual factors, overall themes relating to implementation were highly consistent. Health and social system factors were identified as important in all settings. Key barriers related to constrained health resources and shortage or limitations of maternity personnel, particularly midwives. In settings with more private or mixed private-public healthcare, economic drivers led to duplications of care with significant impact on health system costs and undermining the implementation of evidence on the value of scaling up midwifery care. Facilitators were, in most settings, the concordance with national policies to promote public health, improve health education and outcomes and address equity challenges. Socio-cultural barriers related primarily to professional and gender hierarchy influencing attitudes towards midwifery care and autonomy. Conversely, issues relating to care in groups were primarily motivating factors, which resonated with the desire for time with health care providers, more social support and more personalised care. Although some providers expressed initial concerns that group care may be less personalised, the analysis of observation, interview and survey data illuminated how a well-functioning group approach can be highly personalised, and more so than individual care.

There are few prior studies focused on implementation of group care. A small study in England found that midwives were highly motivated to overcome practical challenges to implementation by professional satisfaction where they felt they could provide a higher quality of care and return to their

ideals of midwifery (Wiseman et al. 2022). The findings of our evaluation also echo a systematic review of provider experiences globally, which identified themes of group care being 'worth the work', and more professionally satisfying as providers (in most studies midwives) felt they could provide better quality of care and found the process more enjoyable.

A range of practical challenges were shared across the different country settings such as difficulties in finding suitable venues – in community settings and large enough for groups. Although specific details varied, there were shared themes in relation to the way maternity care is configured, mainly oriented in relation to secondary (hospital) rather than primary (community) settings and often lacks integration with other public services such as public health and social supports for families. Making connections with such services and working on integration was an important means by which services involved in GC_1000 were able to progress implementation. The findings on practical challenges raise considerations for system and organisation level. At system level, although many countries have policies advocating a stronger focus on public health and primary care, a significant proportion of health resources remain in secondary and tertiary care and integration between different sectors such as health and social care and support for families remains limited. In the Netherlands, a key perceived facilitator was co-facilitation between midwives and maternity care assistants, lowering the costs of providing care. In the UK, despite a national maternity policy advocating more cross-boundary working, midwives experienced lack of access to suitable community venues as a major practical barrier because of cross-charging between systems, as well as impact of austerity on closure of community facilities. This barrier was partly overcome in the site implementing Parenting Circles by co-working with health visitors, who were based in the Local Authority sector and so had such access. Nonetheless, boundary issues were considered a major challenge for sustaining and scaling up the Parenting Circles model. It was important to note that the nature of barriers and facilitators did not fall along lines of high, middle or lower-middle income countries but in relation to health system type and particularly the role and scope of midwives.

Adaptations

Most planned adaptations drew on input from WP3 and were designed to support implementation in the context rather than changes to core elements of the model, with the aim of adapting to context while maintaining fidelity. The evaluation observed any unplanned changes and analysed implications for fidelity with reference to the two conceptual models in the literature, namely the Pregnancy Circles Core Values and Components Model (Wiggins et al. 2022) and Gresh et al's (2023) conceptual model of Well-child Care (group postnatal care). Assessment of fidelity drew on observations of a sample of groups in each country and facilitators' own self-evaluations. Observation notes were summarised using a group care fidelity checklist developed by Group Care Global, designed to assess fidelity to the CenteringPregnancy model of group care (Rising et al. 1998), and interviews or focus groups with facilitators and those receiving group care.

Fidelity

As discussed in Chapter 4, despite the wide range of contexts, there was a high level of fidelity with core values and components of group care.

An important element contributing to fidelity was the provision of tailored training workshops in each country. Observation of a sample of workshops, and follow-up interviews with midwives in some settings highlighted how the workshops modelled the principles and techniques of facilitating group care, enabling the participants (who were mostly midwives but also other health providers such as health visitors or auxiliary health workers and stakeholders such as managers and decision-makers) to understand the model in a practical and meaningful way. Participants were able to experience the model themselves and how it functions, from a facilitator and a participant perspective, which facilitated translation of abstract evidence into practical and embodied understanding, engendering confidence in being able to implement this approach to care.

All planned adaptations were concordant with the three core group care elements of combining healthcare with group discussion, an interactive and active approach to learning and social support and community building. With some minor modifications in South Africa and Ghana in relation to ethical committee requirements and literacy levels, women were supported to conduct their own routine screening checks such as weight, blood pressure and urine testing. Self-checking was also incorporated in the postnatal and parenting groups in those countries which implemented these, with parents conducting routine self and baby health-checks with professional support in all cases, in the group space. One-to-one clinical checks by professionals were sometimes conducted in an adjacent space, or on a low bed instead of a mat, for practical reasons. Facilitators did not always feel able to limit the time to around 3-5 minutes but midwives involved were observed to maintain the focus on bringing discussion and interaction back to the group. In all countries, the groups were observed to be highly interactive, and more facilitative than didactic, and both social support, sense of building community and enjoyment of an active approach to learning was confirmed by women's accounts of their experience of care, often comparing it favourably with other care experiences. All groups aimed to maintain continuity of facilitators and participants, although this was not always fully maintained. For example, in groups focused on refugee women, complex lives often led to lower attendance and in a few cases, managers not understanding or supporting the model did not support continuity of staffing. A number of groups were smaller than planned because of recruitment challenges; facilitators found it more difficult to maintain interactivity in very small groups.

Experiences of women and family members of group care

The evaluation shows that across all settings, the experience of participation in group care was positive. This accords with the findings of the two systematic reviews conducted as part of the GC_1000 programme: a review of satisfaction measured quantitatively (Sadiku et al. 2024) and a review and metasynthesis of qualitative studies of women's experiences of group care (Horn et al. 2023). The satisfaction review identified that in all but a few settings, satisfaction was higher among women receiving group care than standard care. In settings where satisfaction was not increased, most specifically Sweden, qualitative studies identified reasons including lack of training and interest among the facilitating midwives leading to limited fidelity in terms of interactive style of facilitation (Andersson et al. 2014). Horn et al's (2023) qualitative review identified consistent themes of learning through sharing and the importance of relationships.

Experiences of facilitators

The analysis also identified that across all seven countries, facilitators (who were most often midwives but also health visitors and other health workers) expressed considerable professional and personal satisfaction with working in this way. Stresses recounted were primarily in relation to the challenges of implementing a new approach in a system which, to varying degrees across countries, did not easily facilitate this way of working. The satisfactions described by facilitators in our evaluation echoed the themes in Lazar et al's (2021) systematic review of feeling able to provide higher quality care closer to their own ideals of practice, which made the work involved worthwhile.

It should be remembered that those involved in such studies are typically volunteers; providers would be more likely to volunteer for new projects if interested and motivated. Nonetheless, the analysis identified that not all facilitators had actively volunteered for the project – some had been allocated to this or were part of a team or service that opted in to it rather than making an individual choice. A small number reported having disliked the idea of working with groups, or a lack of confidence in the approach. Observation of the workshops, group care sessions and interviews identified the ways in which experience led to growing confidence in the approach. Similarly, although in most settings pregnant women had opted in, or if opt-out had consented to this form of care, recruitment records show that reasons for declining were most commonly practical (such as lack of time off work or lack of childcare) and this was echoed in women's survey responses regarding reasons for non-attendance.

A further consideration is that this is a complex intervention – a model which bundles together several different elements including increased time, social support and relational continuity for which there is independent evidence of benefit, so it is important to consider whether the sum of such an intervention is greater than the parts. This will be discussed further under mechanisms of effect.

Mechanisms of effect

The analysis of mechanisms of effect showed good concordance with the framework derived from a realist review of the literature in relation to theories and propositions about how group care works for people (Mehay et al. 2023). This analysis also enabled further consideration of the relationship between the essential components of the model and the mechanisms of effect – that is, how it works in practice in different contexts to achieve intended outcomes. A clear element of reciprocity was threaded through these mechanisms as supported by the approach: the relational continuity and interactivity contributed to this. Reciprocity in care is a key theme identified in existing literature on the value of continuity of carer, contributing to positive emotion work for midwives and positive care experiences for women (McCourt & Stevens 2006). Similarly, time formed a strong thread running through in support of each of the mechanisms. The greater time allowed by the group model was facilitative for all the key elements and was commented on in facilitator and participant interviews. The economic analysis showed that group care typically enabled provision of 4 times longer for visits overall than in individual care.

As with experiences of facilitating and participating in care, the mechanisms were consistently relevant across the seven country contexts, despite the diversity of national income level, socio-cultural contexts and health systems.

The mechanism of continuity of carer has been extensively researched (Sandall et al. 2016a), showing similar outcomes to those found in systematic reviews of experiences and outcomes of group care (Catling et al. 2015; Byerley & Haas 2017; Hoxha et al in submission) including reductions in preterm birth in some populations and greater satisfaction with care, increased breastfeeding, and some reductions in birth interventions (Sandall et al. 2016b). A key difference is that midwifery continuity of carer includes continuity throughout the perinatal period, including intrapartum care, whereas group care typically only provides continuity antenatally plus one postnatal reunion, or in one of the GC_1000 settings, antenatal and postnatal care (UK- Parenting Circles). Group care has not been found in existing literature to be associated with differences in birth interventions. Similarly, there is considerable wider evidence for the health benefits of social support (McCourt 2017) and a clear pedagogical and equity basis for the value of participatory learning (Freire 2017, orig 1968; hooks 1994).

Midwifery care, and specifically midwife-led care, has also been associated with optimal maternity care experiences and outcomes (Renfrew et al. 2014). Therefore, in some settings, the experience and outcomes of group antenatal care may be conflated to some degree with the impact of midwife-led care. Four of the GC_1000 countries (UK, Netherlands, Ghana and South Africa) had established midwifery care with midwifery led care for women with healthy pregnancies and referral to collaborative care with obstetricians for those with risk factors. Suriname, Kosovo and Belgium all have professional midwifery care but without establishment of midwife-led care, and in all three countries antenatal care was typically

obstetrician/gynaecologist led with midwives in a less autonomous role. Although this led to additional implementation challenges, the findings in relation to experience of care showed enhancements in settings with and without established midwife-led care, and across differing levels of formal midwifery professional autonomy.

Our analysis illuminated the ways in which the mechanisms of group care are interactive and mutually supportive, in such a way that the impact of this complex model may be more than the sum of its parts (McCourt and Downe 2019). This highlights the importance of maintaining fidelity to core principles when adapting to context, as was achieved in this programme.

We developed a realist model of context-intervention-mechanism-outcome relationships to conceptualise the findings of the analysis and existing literature on group care (figure 7.1).

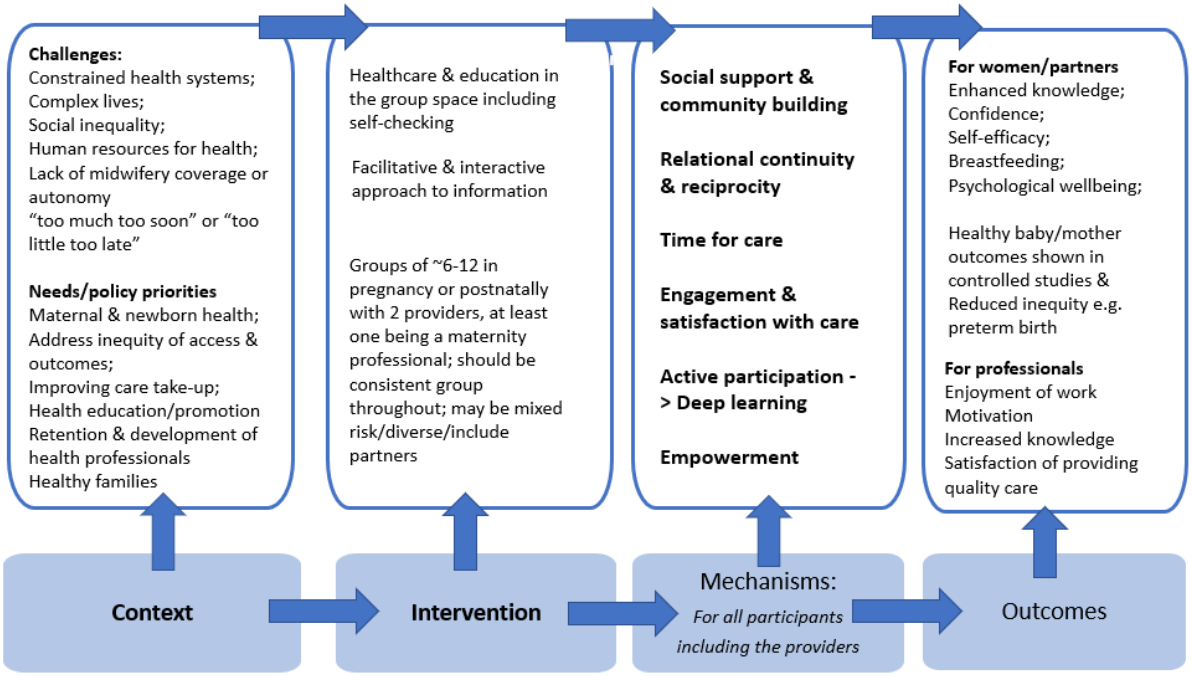

Figure 7.1 Context-Intervention-Mechanisns-Outcomes model – all countries

Strengths and limitations of the evaluation

The evaluation used a design suitable for implementation focused research. The evaluation drew on all stages and work-packages to ensure an understanding of contextual influences, any adaptations made to the model, the fidelity in practice, the experiences of providers and patients, key care outcomes and costs. An implementation focused process and evaluation design does not permit formal comparison of outcomes with standard care – the nature of the project meant that control groups were not possible to achieve that would permit a formal or statistical comparison. Nonetheless, through qualitative data collection and analysis and quantitative description we illuminated from professional and patient

perspectives, and researcher observations, how the group model is experienced in comparison with the experiences of standard, individual care. In addition, the themes aligned well with those of systematic reviews conducted within the GC-1000 project, or linked to it, and with previously published reviews (discussed below). Clinical outcomes and cost analyses were contextualised in relation to routine data for different countries where such data were available. For example, in the UK the national maternity survey (CQC 2023) and the national and service-level outcome statistics for the same year (NHS Digital 2023) provide a detailed picture of experience and outcomes of standard care. In the Netherlands, a RCT was published recently which will enable descriptive findings to be considered in relation to with trial outcomes in the same country setting – for example, a significant increase in breastfeeding rates (Jans et al. 2023). The completion and publication of a comparable trial in the UK was delayed because of Covid-19 and findings of this evaluation will be considered in relation to the trial outcomes when available later in 2024. Samples in some countries were also smaller than planned as a result of Covid-19-related direct and indirect delays in implementing group care, combined with the approximate 15-month time period from booking in pregnancy to final receipt of postnatal data.

The framework for analysis was theoretically informed, using the Consolidated Framework for Implementation Research in both the RQI contextual analyses for each country, and the overall evaluation of the implementation process and factors influencing this.

The framework for analysis of fidelity and mechanisms of effect drew on two key studies, each of which synthesised global theories and evidence on the model of group antenatal or postnatal care. The analysis of fidelity in most countries drew on Gresh et al's 2023 scoping review to construct a conceptual framework for well-child care (postnatal group care). In the UK, this analysis drew on the 'core values and components model' developed as part of the REACH Pregnancy programme feasibility studies and pilot trial of group antenatal care. For mechanism of effect, the evaluation drew on Mehay et al's realist review of published propositions and theories of effect of group care, with additional frameworks used in some settings (for example, in Suriname Renfrew et al's 2014 global Quality Maternal and Newborn Framework was also used).

Four systematic reviews were conducted as part of the GC_1000 programme – a review of clinical outcomes evidence (in submission), a review of quantitative satisfaction measures (Sadiku et al. 2024), a review of qualitative studies on experience of care (Horn et al. 2023 preprint and under review) and a review of economic evidence (van den Akker et al. in submission). In addition, we drew on a linked systematic review of provider experiences of facilitating group care (Lazar et al. 2022). Sadiku et al's systematic review found significant improvements in maternal satisfaction in studies in all but two settings. Horn et al's systematic review and metasynthesis identified changes in style of learning that are echoed in our findings on mechanisms of care. Lazar et al's review found the midwives facilitating

group care found it highly satisfying and ‘worth the work’. This review also found that most studies took place in the context of pilot studies and early implementation, meaning that facilitators were more likely to be volunteers and interested in the model, but also encountered the challenges and additional work of implementing a new care model. This is also echoed in the findings of our evaluation.

The use of mixed methods of data collection was a strength as it enabled evaluation from different perspectives – service managers and health professionals, patients and research observers. We were also able to draw on the reflections of the consultants providing training workshops and follow-up mentoring of facilitators. Use of different formats was also an asset as qualitative findings from interviews and observations could be compared with those from participant survey responses and facilitator records. These were broadly comparable, but a main area of divergence noted was in relation to birth experience. Although participants reported enhanced levels of feeling prepared for labour and birth, and feeling they should be able to make decisions about their care, compared with national reference data and previous maternity experiences, the lack of continuity through intrapartum care meant that professionals attending labour and birth did not always share consistent philosophy or expectations of patients’ decision making.

CHAPTER 9 – CONCLUSIONS AND IMPLICATIONS FOR PRACTICE

Group care was implemented in all participant countries, with the scale ranging from a single site (SA) to five sites plus additional linked projects (NL), involving from 34 to 225 women, plus partners in some or most groups in three countries (Suriname, UK, Netherlands). All countries implemented antenatal groups and three countries also implemented postnatal/parenting groups, in one setting (UK) with an integrated ante-postnatal model. In one UK setting group antenatal care was implemented with caseload midwifery teams providing intrapartum as well as antenatal and postnatal continuity. The timeline for implementation was affected significantly in all countries by the Covid-19 pandemic, with up to 2 years from initial plans in the case of South Africa.

Implementation was affected by a range of factors which were identified during the RQI and subsequent data collection. Factors were analysed using the Consolidated Framework for Implementation Research, which highlighted the importance of system and organisation level factors (outer setting and inner setting) with a greater number of barriers than facilitators. In systems providing universal care and those with established midwifery care with a reasonable level of autonomy and midwife-led antenatal care implementing and sustain group care was better supported, but even in these contexts, other systemic factors such as lack of sufficient integration between primary and secondary care and health or social care sectors, or separate remuneration systems, provided challenges. In contrast, characteristics of individuals and the intervention itself were more facilitative, as the concept attracted many professionals and aligned well with public health priorities and policies; additionally planning, preparation and training were integrated into the process. The role of the GC_1000 programme, providing training workshops and mentoring, a framework for contextual adaptations and implementation support and a range of supportive materials and activities should not be underestimated, and lessons from all these processes have been fed into national blueprint document and a global toolkit and community of practice (WPs 6 - 7) to support continuation once this more focused support is not available.

In all settings, whether high or middle-lower income countries, maternity staffing levels posed challenges. In some settings (Belgium, UK, Netherlands), there was a focus on inclusion of women from more disadvantaged socio-economic groups and refugees or migrants, as group care was considered a potential route to improving maternity care engagement and outcomes (Byerley and Haas 2017). In some of these settings, attendance rates were low. Responses of women interviewed and midwives' reflections in interviews indicated that this was primarily related to complex lives. Similarly, survey responses indicated that the main reasons for participants not attending groups were practical or situational rather than lack of interest or enjoyment of the care. A range of lessons were drawn about the

practical and organisational challenges, such as in working with cultural mediators or interpreters; the time and skills needed for working with interpreters in group care remains an area for further exploration in future studies.

All countries planned for the number of sessions to be offered in relation to usual care schedules in the respective countries, although not all sessions were able to take place for practical reasons, and some sites initially planning implementation (e.g. 1 site in Kosovo and services in Northern Ireland) were unable to go ahead for reasons including lack of senior decision-maker support (Kosovo) or severe staffing shortage (Northern Ireland). In two countries, postnatal/parenting groups were implemented, providing between 3 postnatal sessions (one site in the UK) and up to 2 years of age in Suriname. In other settings, aligned with Centering-based group care guidelines, antenatal groups plus one postnatal reunion session were implemented.

Fidelity

In all settings, the planned adaptations were focused on supporting feasibility in the context while maintaining fidelity to the core model components and values. Unplanned adaptations were typically responsive to the context as it unfolded and showed only limited impact on fidelity. Even in specific cases where the facilitators had less continuity or were a little less able to manage a highly interactive approach and brief individual checks, responses from women participating indicated that they found the groups more engaging and interactive than individual care they had experienced previously. The training workshops and follow-up mentoring through intervision/reflection sessions were identified as an important element to support fidelity and sustainability, as professionals adapted to this way of working, developing their facilitation skills and confidence over time.

Economic feasibility

In all settings, the average number of participants in groups was lower than planned with implications for the economics of implementing and scaling up or sustaining group care. The economic analysis showed that group care in the GC_1000 programme enabled services to provide around 4 times as much time with providers as in individual care, at around twice the cost. The costs of providing care would be lower with higher group attendance, which might be realised more easily once a model of care is implemented as part of the routine service and established as a norm. For this reason, a costing tool has been developed, included in the GC_1000 Toolkit (see D6.30, to enable services to model the cost implications of different sizes and configurations of groups. Considerations of scale and routinisation are also important since it is only above a certain scale that regular clinics could be replaced, and training becomes integrated as part of regular pre-registration education and continuing professional development for health professionals. In most countries, facilitators with initial training and experience were offered ‘master-trainer' workshops to enable cascading of training workshops at regional and local

level. In future, consideration of including the skills for facilitating group care within pre-registration programmes will be needed.

The implementation-focused design of this evaluation precluded direct cost-effectiveness analysis. Development of a decision model using cost analyses and systematic review of global evidence on clinical outcomes of group care would enable future consideration of cost-effectiveness.

Experiences and mechanisms of group care

Analysis of provider and participant experiences of group care showed a high concordance with the 'mechanisms' framework identified from prior literature (Mehay et al. 2023). In all countries and for a range of participants (chapter 5), each mechanism was found to be present and was valued highly by facilitators and women participating. The analysis highlighted the iterative and mutually constitutive nature of these mechanisms whereby each tended to support the others and findings could often be coded in relation to different mechanisms – such as continuity and social support, or professional development and empowerment. This has important implications for implementing and sustaining the model since in a model of this nature, removing one key element may affect the overall functioning and effectiveness of the model.

Overall, we conclude that group care can work for people in a wide range of settings, whether high-, low- or middle-income countries. Our analysis supports further understanding of how the benefits identified in wider literature are achieved and can be applicable to a diversity of participants. The value for maternity professional development and satisfaction is relatively under-researched and our evaluation highlighted the importance first of preparation and support for facilitators, and then of the professional satisfaction and potential development gained from working in this way, despite the hard work involved in establishing the groups. More research into how professional development through this approach to care helps to support empowerment of pregnant women and their partners would be beneficial in future. Similarly, like most previous studies, these were in most cases newly established groups, in sites implementing group care for the first time, even if there had been prior experience in the country. Further work in future should focus on experience and sustainability once care is more established and routinised and on impact on staff wellbeing and retention. The groups in this programme varied in the level of involvement of partners and in the inclusion of different languages in group care. More work on both these issues would be valuable in future.

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APPENDICES

Appendix 1 – Details of Methods

Qualitative interviews and focus groups

Semi-structured interviews with key stakeholders involved with decision-making and facilitation of implementation to understand local perspectives and gain insights into implementation aims and challenges across the different settings.

Focus groups with women who received group care, and their partners or family members when present to explore experiences of using group care, as well as the potential benefits, or unintended consequences.

Reflective focus groups with group care facilitators to draw lessons from their experiences and to understand the impact of this way of providing care on their approach to, and satisfaction with, their work and relationships with their clients.

Observation notes

In addition to the analysis of records and notes kept of all project meetings and field notes observation notes were kept on key implementation activities. These included:

- Notes and observations of the induction, preparation and training sessions for those facilitating group care to understand preparation and support needs for implementing and scaling up the model
- Observation of group care activities (e.g., ANC, PNC) and, where possible, traditional care in each implementation setting, to obtain an insight into the mechanism of this model of care in the light of the usual care context, and to observe implementation fidelity in relation to the core principles of GC).

Fieldnotes and relevant documentation

Fieldnotes from project meetings and facilitator reflection sessions, to capture key learning for implementation, scale-up and sustainability.
Relevant local policy and guidelines documents to support understanding of the role of context in the implementation experience and outcomes

Topic guides were used for interviews, focus groups and observations, which were adapted by the CITY team from topic guides used in the Pregnancy Circles RCT and process evaluation (Wiggins et al. 2020).

Facilitator Self-Evaluation forms

These forms were developed by the WP4 and WP5 teams with reference to key features of group care defined by Group Care Global. including a brief checklist to self-assess fidelity to be completed after each session. A log of attendance, meeting time, facilitators present and any materials used was also included to enable costing. Facilitators were also asked to fill out two brief reflection questions at the end of the forms, and comment how well they felt the

group worked that day. In addition, notes of reflection sessions between group care consultants and facilitators were retained for review.

Women's survey

All women who received group care, and where feasible a control sample who received standard care, were asked to complete two brief questionnaires, one in late pregnancy and one postnatally.

The survey was administered online between 32 and 35 weeks of pregnancy and between 4 and 8 weeks postnatally via Qualtrics software where feasible (women have adequate internet access and literacy and can speak the main local language) or in-person by the in-country research team, following the last antenatal and postnatal group sessions. The survey schedule was adapted from a schedule used in the Pregnancy Circles trial in the UK, to capture similar measures among women receiving group care (Trial Registration Number 91977441) and was piloted to ensure accessibility and that it should take no more than 20 minutes to complete. It included validated scales to assess psychosocial mechanisms and outcomes (the Pregnancy Related Distress Scale (Yali & Lobel 1999); the short Warwick-Edinburgh Mental Wellbeing Scale (https://warwick.ac.uk/fac/sci/med/research/platform/wemwbs) and the Pregnancy Related Empowerment Scale (Klima et al. 2015), satisfaction and process related questions, including measures of costs of care attendance for women and families.

Routine or clinical outcomes and cost data

Routine data relating to care outcome indicators were collected, depending on what items were available in each country, and whether at local, regional or national level. These were focused on measures assessed in prior studies of this model of care: birth interventions, healthy baby and healthy mother outcomes and breastfeeding rates.

Process measures for economic analysis included:

- Attendance at antenatal care (number of visits, gestational age at timing of visits)
- Postnatal care attendance (number of visits and timing of visits postnatally)
- Numbers of women in each group
- Staffing of groups – professional group and grade, time required for visits for HCPs and mothers
- Additional health service costs to provide group care (e.g. staff time, equipment or facility/premises costs)
- Care setting (for antenatal, birth and postnatal care)
- Additional health service usage ante- and postnatally (hospital admissions for mother, number of times infant brought to medical or hospital care – collected via women's survey or routine data systems

Where controls were not feasible, existing evidence (from audit or published research) on the costs and outcomes of group care versus standard care in different country settings was used to contextualise understanding of the findings.