1 Designing and implementing two facilitation interventions within the 'Facilitating

2 Implementation of Research Evidence (FIRE)' study: A qualitative analysis from an external

3 facilitators' perspective

4

5 **Authors**

6 Gill Harvey, Adelaide Nursing School, University of Adelaide, Australia.*

7 gillian.harvey@adelaide.edu.au

8

9 Brendan McCormack, Division of Nursing, Queen Margaret University Edinburgh, Scotland.

10 bmccormack@qmu.ac.uk

11

12 Alison Kitson, College of Nursing and Health Sciences, Flinders University, Adelaide,

13 Australia. alison.kitson@flinders.edu.au

14

15 Elizabeth Lynch, Adelaide Nursing School, University of Adelaide, Australia.

16 elizabeth.lynch@adelaide.edu.au

17

18 Angie Titchen, Formerly Institute of Nursing and Health Research, University of Ulster, Northern

19 Ireland & Knowledge Centre for Evidence-based Practice, Fontys University of Applied Sciences, The

20 Netherlands. a.titchen@gmail.com

21

22 * Corresponding author

23

24 **Abstract**

25 **Background**

26 The 'Facilitating Implementation of Research Evidence' study found no significant

27 differences between sites that received two types of facilitation support and those that did

28 not on the primary outcome of documented compliance with guideline recommendations.

29 Process evaluation highlighted factors that influenced local, internal facilitators' ability to

30 enact the roles as envisaged. In this paper, the external facilitators responsible for designing

31 and delivering the two types of facilitation intervention analyse why the interventions

32 proved difficult to implement as expected, including the challenge of balancing fidelity and

33 adaptation.

34

35 **Methods**

36 Qualitative data sources included notes from monthly internal-external facilitator

37 teleconference meetings, ~~notes~~ from closing events for the two facilitation interventions

38 and summary data analyses from repeated interviews with 16 internal facilitators.

39 Deductive and inductive data analysis was led by an independent researcher to evaluate

40 how facilitation in practice compared to the logic pathways designed to guide fidelity in the

41 delivery of the ~~facilitation~~ interventions.

42

43 **Results**

44 The planned facilitation interventions did not work ~~in the way~~as predicted. Difficulties were

45 encountered in each of the five elements of the logic pathway: recruitment and selection of

46 appropriate internal facilitators; preparation for the role; ability to apply facilitation

47 knowledge and skills at a local level; support and mentorship from external facilitators via

48   monthly teleconferences; working collaboratively and enabling colleagues to implement

49   guideline recommendations. Moreover, problems were cumulative and created tensions for

50   the external facilitators in terms of balancing the logic pathway with a more real-world,

51   flexible and iterative approach to facilitation.

52

53   **Conclusion**

54   Evaluating an intervention that is fluid and dynamic within the methodology of a

55   randomised controlled trial is complex and challenging. At a practical level, relational

56   aspects of facilitation are critically important. Iit is essential to recruit and retain individuals

57   with the appropriate set of skills and characteristics, explicit support from managerial

58   leaders and accessible mentorship from more experienced facilitators. At a methodological

59   level, there is a need for attention to the balance between fidelity and adaptation of

60   interventions. For future studies, we suggest a theoretical approach to fidelity, with a focus

61   on mechanisms, informed by prospective use of process evaluation data and more detailed

62   investigation of the context-facilitation dynamic.

63

64   **Keywords**

65   Facilitation, internal-external facilitators, PARIHS, fidelity, adaptation

Introduction

The 'Facilitating Implementation of Research Evidence (FIRE)' study set out to compare two different facilitation approaches against standard dissemination of clinical guideline recommendations [1]. Both approaches comprised facilitator roles and facilitation processes, but were underpinned by different theories, which determined the focus of the role and corresponding skills and knowledge requirements. In both approaches, a model of external-internal facilitation was employed. Separate papers describe the outcome and process findings. There were no significant differences between the three study arms (control and two facilitation types) on the primary outcome of documented compliance with continence guideline recommendations [2]. The realist process evaluation suggested an interplay between mechanisms relating to the alignment and fit of the facilitation intervention with the internal facilitator (IF) and their work setting, prioritisation of the topic of continence and engagement with the intervention, which, in combination that influenced the internal facilitators' IFs' ability to learn over time and enact the role as envisaged [3]. In both types of facilitation, there were examples where individuals in the IF role did and did not enact the role as intended. In turn, this influenced their ability to effect changes in processes and outcomes of care.

Reflecting on the findings of the FIRE study and our experiences as external facilitators (EFs) led to us conducting In this paper, we present a more detailed, retrospective analysis of the process of implementing the two theoretically informed facilitation interventions in an attempt to further understand the observed variations., sSpecifically we undertook to question: Why did the facilitation interventions, as articulated in the study protocol, prove

89   difficult to implement in practice? What issues arose in relation to balancing fidelity and

90   adaptation? What lessons were learned that could be beneficial to inform similar research

91   in the future?

92

93   The paper commences with a description of the interventions labelled Type A and Type B

94   facilitation and strategies employed by ~~external facilitators (~~EFs~~)~~ to prepare, mentor and

95   support ~~internal facilitators (~~IFs~~)~~. This includes a description of the 'logic pathway' [4] of

96   manualised facilitation interventions, which was ~~created~~ developed from the study protocol

97   to guide fidelity.   This is followed by an overview of study methods relevant to this paper.

98   Results are presented in relation to the pathway of how the interventions were expected to

99   work and what actually happened in reality. This frames the discussion of factors influencing

100   the enactment of facilitation roles and processes and what we would do differently with the

101   benefit of hindsight.

102

103   **The facilitation interventions**

104   Facilitation is one of three constructs in the PARIHS framework, alongside evidence and

105   context [5-7]. It represents the active ingredient of implementation, with individuals defined

106   as facilitators taking on a change agency role to identify elements of evidence and context

107   that might influence implementation and then utilising appropriate facilitation methods and

108   processes to enable the implementation process.

109

110   Facilitation is underpinned by a range of theoretical perspectives and influences, including

111   education, counselling, critical social science, management studies and community

112   development [8-12]. The way in which the role, and accompanying facilitation method, is

113   interpreted depends upon the underlying theoretical perspective and this has implications

114   for preparing and developing individuals to take on the role.

115

116   In the development of PARIHS, a concept analysis of facilitation was conducted [13].

117   Reflecting the multiple theoretical influences, the concept was represented along a

118   continuum, ranging from a largely task and project-focused concern to a person-centred,

119   enabling and emancipatory approach. At a conceptual level, the dynamic interplay between

120   evidence and context indicated the need for flexibility, with facilitators having the ability to

121   move along the continuum depending on the needs of the specific situation. In practice, the

122   facilitation approaches employed by members of the PARIHS group reflected two main

123   traditions of quality improvement and practice development [5], which could be positioned

124   at different points from the mid- to right-hand side of the facilitation continuum (see Figure

125   1). This formed the starting point for designing the interventions to be tested in the FIRE

126   study.

127

128   **Type A facilitation**

129   Type A facilitation was improvement-based, similar to approaches used in primary care in

130   Canada, the UK and the US [14-16]. Evidence from primary care and community health

131   settings indicates that this type of facilitation can enhance the uptake of clinical guidelines

132   [17] and improve health outcomes [18]. Type A facilitation was designed as a 12 month

133   intervention, focused on enabling teams to implement evidence-based care through

134   methods such as audit and feedback and Plan-Do-Study-Act cycles [19]. It promoted a

135   pragmatic, goal-focused approach to implementation [20, 21]. Preparing IFs involved

136   equipping them with skills and knowledge that they could apply within their own teams.

137 This included undertaking an initial assessment of the context and applying, using audit and

138 improvement methods to bridge identified gaps and work towards locally agreed, evidence-

139 informed goals. The facilitator's role was to support goal achievement and the process of

140 getting there, for example, by being alert and responsive to group process and contextual

141 issues that could act as barriers to implementation.

142

143 **Type B facilitation**

144 Type B facilitation was a 24-month intervention focusing on a practitioner inquiry approach

145 to enable collaborative, inclusive and participative engagement of individuals and teams in

146 the implementation, evaluation and diffusion of research evidence into practice. Type B

147 facilitation explicitly uses critical social science concepts (e.g., consciousness-raising,

148 problematisation, self-reflection and critique) [22, 23], as well as concepts from the new

149 worldview of critical creativity [24], on the basis that the development of individual

150 practitioners, cultures and contexts would result in sustainable change. Action arises

151 because of a desire by individuals or groups to redress observed contradictions, oppressions

152 or domination, rather than action resulting from power or coercion. The intention is to

153 contribute to emancipation – to encourage new ways of thinking and acting. Critical

154 creativity extends the principles of critical social science with a focus on helping

155 practitioners to creatively explore conditions where everyone can flourish.

156

157 Like Type A, Type B facilitation is concerned with change and innovation, but is also

158 explicitly concerned with individual and team learning and effectiveness, leadership and

159 evidence use and development to transform workplace contexts and cultures of care. A

160 realist synthesis of this approach demonstrated the key methods involved and associated

161 outcomes [25].

162

163 **Methods**

164 *Setting*

165 Detailed study methods, including site and participant recruitment have been reported

166 elsewhere [1]. Eight sites (two per country in England, Ireland, The Netherlands and

167 Sweden) were randomly allocated to Type A facilitation and eight to Type B. There were also

168 eight control sites, not discussed further in this paper. ~~For purposes of reporting, sites are~~

169 ~~identified numerically by country and type of facilitation (e.g. England 1A).~~

170

171 *Participants*

172 Participants were Type A and B IFs and the EFs who worked with them. IFs were identified

173 by managers at participating sites, who were asked to invite registered nurses with pre-

174 specified traits, skills and qualities to take on the role (see Figure 2). Both Type A and B IFs

175 were prepared and supported by two EFs (Type A: GH and ALK, Type B: BMc and AT). To

176 manage the risk associated with an IF leaving during the study, it was recommended that a

177 second nurse be identified as a "buddy". This was a colleague who could take over if the

178 original IF was unable to continue in the role.

179

180 *Designing and delivering the interventions*

181 Both interventions were manualised into a logic pathway for the purpose of maintaining and

182 monitoring fidelity during the trial. This pathway reflected similar processes within Type A

183 and B facilitation, but with differences in focus, intensity and duration (see Figure 3 and

184 Table 1). In order to fit with the rationalist paradigm of the cluster randomised controlled

185 trial, the 'dose' of facilitation was standardised, as this was a major point of distinction

186 between the two facilitation types, underpinned by a theoretical assumption that the more

187 emancipatory approach of facilitation (Type B) would take longer to establish, but could

188 ultimately produce more far-reaching and impactful outcomes. This reflected an original

189 objective of the FIRE study, which was to determine if there was a 'good enough' model of

190 facilitation.

191

192 Once recruited, IFs participated in a residential facilitator development programme (May

193 2010), led by the relevant pair of EFs. This was delivered face-to-face in a central

194 Netherlands location. The Type A programme lasted 3 days and the Type B programme 5

195 days. The outline content for each programme is summarised in Table 2. Following the

196 residential, monthly IF-EF teleconference calls occurred. Type A teleconference support

197 lasted for 12 months (12 teleconferences), whilst in Type B the duration of support was 24

198 months (16 teleconferences). Accordingly, resourcing of IFs and EFs differed as did the

199 specific activities undertaken, (see Table 3), reflecting the different intensity and approach

200 of the interventions (see Table 3). as Type B facilitation was expected to require a longer

201 time to develop and embed. At the end of each intervention, a 24-hour closing meeting was

202 held over 2 days. This was an opportunity for the IFs and EFs to reflect on their experiences,

203 progress made, difficulties encountered and suggestions for how the intervention could

204 have been improved.

205

206 The EF role was largely separate from the running of the trial. In three countries (England,

207 Sweden and the Netherlands) the trial leads were FIRE project team members from the

208 respective countries who had no direct involvement in delivery of the facilitation

209 intervention. The exception was Ireland where an EF (BMc) was also the country/trial lead.

210

211 **Table 1: Type A and Type B facilitation interventions** [about here]

212 **Table 2: Summary of content in Type A and Type B facilitator development programmes**

213 [about here]

214 **Table 3: Comparison of facilitation 'dose' and activities by Type** [about here]

215

216 *Data collection*

217 Qualitative data sources included: written notes of monthly teleconference meetings and

218 the closing events; synthesised accounts of interviews with IFs by independent research

219 fellows (RFs; one per country) at 6 monthly intervals. During the teleconference meetings,

220 one EF took on the lead facilitator role and the second EF captured notes of the discussion,

221 which were then shared with the IFs. A similar process occurred at the closing meetings. IF

222 interviews occurred 6, 12, 18 and 24 months after the start of the intervention. These were

223 conducted by the country-level RFs, using a semi-structured interview guide to collecting

224 data on the residential programme, progress of implementing guideline recommendations

225 and barriers and enablers influencing implementation. Summary notes of interviews were

226 written by RFs, and those from Swedish and Dutch sites were translated to inform analysis.

227 During data analysis meetings, RFs worked collectively to synthesise data relating to

228 facilitation, as part of the process evaluation [3]. These data summaries were used to inform

229 the analysis for the current paper.

230

231 *Data analysis*

232   Data were initially analysed by an independent researcher (EL) who was not involved in data

233   collection or delivering the interventions. Data from each site were collated, checked for

234   accuracy, and any discrepancies were clarified with the EFs. Summary notes from all sources

235   were exported to NVivo 11. Data were broadly mapped to the component elements of the

236   logic pathway (Figure 2), and data within each grouping were inductively coded. In

237   conducting the data analysis, the purpose was two-fold: firstly ~~this way, a comparison was~~

238   ~~made~~ to determine how closely facilitation in practice at each site aligned with the logic

239   pathway; and secondly to develop an explanatory account of why and how the logic

240   pathway was or was not maintained. A series of teleconference meetings between the

241   independent researcher and the four EFs took place during the data analysis process to

242   discuss and interpret the findings. Notes from the joint analysis meetings were documented

243   to inform our interpretation of the results.

244

245   **Results**

246   The results are presented according to the main elements of the logic pathway. Sites are

247   identified in relation to country and type of facilitation; feedback from individual IFs is de-

248   identified to maintain anonymity. Key EF reflections relevant to the findings, and particularly

249   to the perceived limitations of the logic pathway are also captured.

250

251   *1. Recruitment of IFs meeting essential criteria*

252   Timely identification and long-term retention of IFs was problematic; only 6 of the 16 sites

253   recruited an IF who met the essential criteria and stayed in the role for the intervention

254   period. The requirement to attend the residential programme influenced IF selection at one

255   Type A English site, (England 2A); the preferred facilitator was unable to attend the

256   residential, so an alternate staff member was selected.

257

258   One Type A site in the (Netherlands 2A) commenced six months after the others due to

259   problems with site recruitment. IFs at 5 sites discontinued in the role due to sick leave (3

260   Type A: England 2A, Sweden 2A, Netherlands; 1A, 2 Type B: Netherlands 2B, Sweden 1B);

261   another 2 discontinued due to leaving the institution (Both Type B: England 1B, and Ireland

262   2B). IFs at 3 sites did not meet the essential criterion of being in a clinical leadership

263   position; one was a new graduate nurse (Netherlands 2BType B); another a licensed

264   practical nurse (Sweden 2BType B); a third was an assistant nurse (replacement Type A IF:

265   at Sweden 2A).

266   EF reflection: It was clear from the outset that some IFs selected to attend the residential did not fit the 'ideal

267   type' facilitator, for example, in terms of personal characteristics, confidence and interpersonal skills. This

268   feedback was provided at the regular FIRE project team meeting; however, given the timetable for the trial and

269   the study resources, there was no option to identify and train an alternative IF. Could the country leads have

270   been better briefed and prepared to negotiate IF recruitment with nursing home managers?

271

272   The buddy system had variable success. Buddies became IFs at 4 of the 7 sites where the

273   original facilitators ceased in the role (Type A: England 2A, and the Netherlands; 1A, Type B:

274   Ireland 2B, and Sweden 1B). New IFs were identified at two sites (Type A: Sweden 2A, Type

275   B: Netherlands 2B), but at one site (England 1BType B), no replacement was organised when

276   the IF left the organisation.

277   EF reflection: From the outset, we recommended that it would be beneficial to have both the IF and buddy attend

278   the face-to-face residential programme, but the study budget was insufficient to support this given the

279   international travel costs involved. This situation was not ideal.

280

281   *2. Preparation of the IFs for the role*

282   Type B IFs at both English sites were unable to attend the residential programme, and one

283   Type A Netherlands site commenced 6 months late, so shorter development programmes

284   were organised for the IFs. In response to the turnover of IFs, condensed programmes were

285   organised for replacement IFs at 2 sites (Type A: Sweden; Type B: Ireland 2B, Sweden 2A).

286   Replacement facilitators did not receive any formal preparation at 3 sites (Type A: England

287   and the Netherlands; Type B: Sweden 1B, Netherlands 1A, England 2A), mainly due to timing

288   and logistical issues.

289

290   Facilitator development programmes were delivered in English, so IFs needed to be able to

291   speak and understand the language fluently. Swedish and Dutch interpreters attended the

292   original Type A and B programmes to assist with translation. Despite these arrangements,

293   there was consistent feedback from the Swedish and Dutch IFs that aspects of the facilitator

294   development programmes were difficult due to language issues.

295

296   The Type A residential programme was reported to be beneficial in terms of perceived

297   usefulness of the content, advice and written resources provided and building peer

298   networks. IFs at 3 sites reported that the programme helped to develop a facilitation plan

299   (Ireland 1A, Sweden 1A, Sweden 2A); hHowever, one facilitator IF was unable to see what

300   changes could be achieved through facilitation; (England 1A). The IFs from the Netherlands

301   others reported that they were unclear about the PARIHS framework, which in turn led

302   tocreating uncertainty about role expectations (Netherlands 2A). The 3 day residential was

13

303 reported by some participants to be too short, with a lot of information provided in the

304 time.

305 EF reflection: The IF who expressed doubts about facilitation was the only participant at the residential who was

306 also the manager of the nursing home. At the time, we questioned her suitability for the IF role as she did not

307 show any 'buy in' for the proposed way of working as a facilitator.

308

309 The Type B residential programme filled a number of the IFs with enthusiasm and was

310 generally informative and enjoyable. However, not all IFs felt comfortable with the more

311 reflective, emancipatory proposed methods of facilitation – one felt that the approach was

312 not a good fit with her personality (Netherlands 2B);and another reported that the

313 proposed facilitation methods would make staff uncomfortable (England 2B). Two IFs

314 reported a loss of confidence during or after the residential programme (replacement IF

315 Ireland 2B, Netherlands 2B). The written resources provided were useful but both Swedish

316 IFs commented that they were not available in their primary language. Two IFs reported

317 that it would have been useful for the buddy to attend the facilitation programme

318 (Netherlands 1B, Ireland 1B).

319 EF reflection: It was evident during the residential programme that working in a second language was

320 challenging for some IFs. Supportive co-learning relationships emerged among the group members to support

321 participants who did not have English as a first language. However, maintaining this level of support after the

322 residential surfaced as a concern. The IFs were returning to their places of work without immediate support being

323 available. In Sweden and the Netherlands, some local facilitation and translation of resources was offered later in

324 the programme, but was only minimally taken up in one setting.

325

326 *3. IF application of facilitation knowledge, skills and tools*

327 Some IFs reported increasing confidence as their knowledge and skills developed,

328 particularly around the topic of continence care.

329 *"I've upskilled in continence management, became more aware of standards and*
330 *guidelines"* [Ireland 2A]

331

332 In part, this may have occurred because additional subject expertise was sought by the EFs.

333 At the Type B residential programme, an expert in continence in nursing home care

334 provided an overview of the evidence underpinning the guidelines and facilitated discussion

335 about practical strategies for managing incontinence. Type A EFs also organised a

336 continence expert to join two teleconference meetings when the need for additional

337 knowledge was identified.

338 EF reflection: Provision of expert input on continence management was not planned into the Type A residential

339 programme (unlike Type B). In the early teleconferences, it became increasingly apparent that this was

340 something the IFs felt necessary, hence arrangements were made to invite a continence nurse specialist to two

341 of the teleconferences. This addition to the original Type A plan was an example of an adjustment made during

342 the course of delivering the intervention.

343

344 A number of IFs reported feeling empowered, having developed their skills and ability to

345 apply facilitation knowledge in practice. However, others commented on a lack of guidance

346 after the residential and a lack of progress, which led to loss of motivation, and inability to

347 identify achievable goals. IFs described ways they had empowered others to improve their

348 performance at 5 of the 16 sites (Type A: Ireland, both sites; Type B, Ireland, 1A, 2A, 1B,

349 Netherlands 1B, and Sweden 1B). Four of these sites retained the original IF in the role

350 throughout the study. Facilitators at other sites did not report empowering staff to make

351 changes; instead they stepped away from the FIRE project (1 Type A, 4 Type B), or acted as

352   lone change agents. IFs at 5 sites (3 Type A, 2 Type B) variously reported assuming sole

353   responsibility for activities such as collecting data, conducting continence assessments,

354   creating and helping complete new documentation. ~~The IF from Netherlands 2A~~One Type A

355   IF reported:

356   *"What I have learned is that I may need to step back in the future. That first*
357   *measurement we [IF and buddy] filled in the forms. We could have let them [staff] do it*
358   *themselves. In that way their involvement in the project and their motivation to fill in*
359   *the forms in the future will be higher. However, it was very busy at the time at the*
360   *ward, so probably nothing would have happened at all [if we had stepped back]. "*

361   EF reflection: Why did some IFs choose to work alone and not involve other colleagues? This could be because

362   they felt more comfortable with a more project or task-focused approach; in other words, 'doing for others', rather

363   than 'enabling others'.

364

365   As expected, there was a difference in the strategies employed by Type A and B facilitators.

366   Type A IFs tended to report using systematic processes, such as auditing records (n=4), goal

367   setting, assessing progress and reassessing goals (n=5) and changing paperwork related to

368   continence assessment and management (n=6). By contrast, the most commonly reported

369   strategies by Type B IFs included workshops to identify team values and culture (n=5), and

370   the use of creative approaches with staff to engender enthusiasm, track progress and clarify

371   team values (n=4). Three Type B IFs also reported changing paperwork for continence

372   assessment or management.

373

374   At the majority of sites (Type A and B), IFs strove to increase awareness about the FIRE

375   project, by organising meetings, creating posters and fliers and conversing informally with

376   staff. Both types of facilitators reported that data were collected on an ongoing basis from

377   a number of sources (including audit, patient interviews, staff questionnaires, staff stories,

378 scribble boards and informal observations of practice) and that data were used to develop

379 or refine strategies to improve continence care.

380

381 Getting teams 'on board' was important – Type A and B IFs reported being flexible with

382 plans especially in relation to the time required for changes to occur. Progress was often

383 slower than anticipated and both Type A and B facilitators employed a deliberate strategy of

384 allowing time for incremental changes and staff acclimatisation. ~~The~~ A Type B IF ~~from~~

385 ~~Ireland 1B~~ explained:

386   *"I am pacing myself more now… [There is a] lot of change going on…due to new*
387   *inspection processes. I have to make sure I don't overburden people"*

388 EFs similarly recognised issues relating to the timing and pace of planned activities. For

389 example, at the Type A residential, the IFs were introduced to an online audit system to

390 input, collate and feedback local audit data, according to a schedule agreed by the EFs and

391 IFs. However, difficulties arose related to the IFs' ability to use the online system, limited

392 computer access and skills. This slowed down the planned audit process, such that none of

393 the eight sites reached the point of re-auditing (as originally planned) within the 12-months

394 [26].

395 EF reflection: We assumed the IFs would have a higher level of knowledge and skills with audit and had not

396 anticipated any difficulties with computer access or use. It soon became clear that the plan we developed with

397 the Type A IFs at the residential programme was not going to be realistic for many of them and it had to be

398 adjusted. A great deal of time at the first few teleconferences was spent trying to sort out the issues with audit,

399 which was difficult as there were 10 or more people on the call. Some IFs ideally needed direct, in-person

400 support to develop their skills and confidence in undertaking the audits. This was not an adaptation deemed

401 feasible, as the EFs were geographically distant, or appropriate, as it would significantly change the 'dose' of

402 facilitation.

403

Despite a large number of reported strategies to improve continence care, these were not

~~used~~ applied consistently at different sites, or always to good effect. IFs at every site

reported that time and conflicting duties were barriers, as they all had substantive roles

within the nursing homes. Although funding was provided to allow allocated time for the IF

role, protecting this time was not always achieved.

> *The IF [did not] negotiate with the management to secure protected time, to seek the*
> *establishment of resources…This resulted in the IF having to do the work at home and*
> *to use her own personal equipment and to do the work on her own time off [research*
> *fellow notes relating to Type B IF~~, Ireland 2B~~]*

EF reflection: Was the IF's inability to negotiate protected time linked to the recruitment issue? The recruitment criteria included clinical leadership in some capacity and practice expertise (Figure 2); thus the EFs did not focus on the development of such skills in the residential programme and had to respond to issues in the teleconference meetings.

4. Mentorship and support through monthly teleconferences

Attendance at teleconferences was variable; IFs from different sites attended between ~~zero~~ none ~~to~~ to all of the scheduled teleconferences. Both Type A and B IFs reported that they

also contacted the EFs via phone or email if they had queries between teleconferences.

Attendance appeared to correlate positively with the ability to apply facilitation skills; 4 of

the 5 IFs who reported empowering staff to make changes, attended all scheduled

teleconferences.

The format of teleconferences allowed for peer support from other IFs, which was seen as

beneficial. However, virtual meetings also presented difficulties; facilitators from 7 of the 16

429 sites reported problems with the technology and IFs from the Netherlands and Sweden

430 expressed language-related problems. Four participants specifically reported that face-to-

431 face meetings would have been better than virtual meetings. As a minimum, it was agreed

432 that a mid-point face-to face meeting would have been beneficial.

433

434 *EF reflection: The more engaged IFs were more likely to enact the role as originally envisaged. The issue was*

435 *what to do about those IFs who did not fully engage or effectively withdrew. Could we have worked more closely*

436 *with the country leads to encourage them to keep going? The lack of more experienced support and mentorship*

437 *at a local level was a recurring problem and highlight the central importance of the relational aspects of*

438 *facilitation.*

439

440 *5. IF development and enactment of facilitation*

441 Building an implementation project team was an integral part of successful facilitation, but

442 was achieved at less than half the sites (3 Type A, 3 Type B). IFs who were able to build

443 effective teams described working with buddies to strategically select people to be involved,

444 including healthcare and management staff from within, and external to, the organisation.

445 Facilitators of successful teams also reported enhancing teamwork by working closely with

446 different parties, communicating regularly and meeting frequently. While some IFs

447 discussed informing residents or families about the project, no site reported including

448 residents or families in the implementation team.

449

450 IFs who did not build successful teams reported explaining to, but not involving nurses in

451 implementation (2 sites), or not organising a buddy (4 sites). Three IFs reported working on

452 their own, rather than together with other team members.

> *"I keep on struggling with time and motivation of my stakeholders… [There is] no change in the view that people see the project as "[IF's] project"… They are not ready to take it on and do it well. [~~Netherlands 2B~~Type B IF]*

Facilitators from 4 sites reported resistance or a lack of support from staff (for example, due to strong personalities or a lack of priority attached to improving continence), and a further 4 sites reported that management and workplace issues were a major barrier to the facilitation project.

> *"[Staff] never attend any of my workshops so I find it hard to get an opportunity to speak with them. When I visit the wards they find some excuse to disappear. They can often intimidate staff who are very open to change." [~~Ireland 1B~~Type B IF]*

EF reflection: This was typical of the situations where direct input and role modelling from a more experienced facilitator would have been helpful.

Summary of Findings

A number of key issues emerge from the findings. Firstly, it is clear that in reality, the planned interventions did not work according to the documented logic pathway. This reinforces the process evaluation findings, which highlighted mechanisms relating to alignment and fit of the facilitation type to the individual and their organisational context, and subsequent engagement and enactment of the role [3]. Issues and difficulties were encountered with each element of the logic pathway and at critical juncture points such as immediately following the residential programmes. It is also apparent that problems were cumulative, such that if the facilitation intervention started with an inappropriate or ineffective person in the role, then subsequent problems and barriers arose in terms of enacting the role effectively. This included not engaging fully in the teleconference meetings and, in some cases, not contributing to the study (without formal withdrawal). EFs faced

479 difficulties balancing the logic pathway with a more real-world approach to facilitation,

480 which involves working in a fluid and dynamic way. As the reflections illustrate, the EFs were

481 acutely aware of difficulties as the project progressed. These were fed back and discussed at

482 FIRE project team meetings. There was agreement over some relatively minor adjustments

483 to the delivery of the facilitation interventions, but not to make changes that could affect

484 the dose or intensity of Type A or B facilitation, as this was seen to compromise the integrity

485 of the trial.

486

487

488 **Discussion**

489 We return to the questions that framed the paper to structure the discussion: Why did the

490 facilitation interventions, as articulated in the logic pathway, prove difficult to implement in

491 practice? What issues arose in relation to balancing fidelity and adaptation? What lessons

492 were learned that could they be beneficial to inform similar research in the future?

493

494 *Applying the facilitation interventions within a standardised logic pathway*

495 Challenges in applying the logic pathway for the facilitation interventions in practice related

496 to: the study methodology and design; the nature of the intervention being evaluated; and

497 the logistics of a complex, multi-national study in the particularly challenging context of

498 nursing home care. In terms of IF recruitment and selection, the data clearly demonstrate

499 the importance of having the right person in the facilitator role and paying attention to the

500 fit and alignment of the facilitation approach (for example, goal-focused improvement or

501 practitioner-led enquiry) with the individual and organisational characteristics. However, EFs

502 did not have a direct role in the selection of IFs, other than identifying the key selection

503   criteria (Figure 2). Nor was it possible to address issues of fit and alignment a priori given

504   the randomisation process that was part of the study design. Sometimes, despite the best

505   efforts of sites, there were no staff available that met all the selection criteria. However,

506   more active engagement between the EFs and the country leads responsible for liaising with

507   sites to identify IFs could have helped to ameliorate some of the problems encountered.

508

509   *Issues relating to study design*

510   This highlights the tensions inherent in evaluating an intervention that is by nature fluid and

511   iterative within the methodology of an RCT. The research environment imposed a very

512   different set of conditions to the natural, real-world delivery of a facilitation intervention.

513   The logic pathway was primarily developed to address issues of fidelity within the trial, with

514   a particular emphasis on standardising the dose and intensity of facilitation provided in both

515   interventions. From an EF perspective, this imposed limitations in terms of the flexibility

516   that was possible as issues arose during intervention, as illustrated in the findings.

517

518   The international scope of the study added another layer of complexity, for example, in

519   terms of coordinating site and IF recruitment so that all IFs were able to attend the initial

520   residential programme and making provisions for IFs who had English as a second language.

521   These and other logistical issues were a feature throughout the study and made the IF role

522   in Sweden and the Netherlands especially challenging, particularly if compounded by

523   problems relating to fit and alignment of the facilitation approach. Issues related to staff

524   turnover presented an additional challenge and one that other studies of interventions to

525   change practice in a nursing home context have reported, where workload is high and

526 numbers of registered nursing staff are typically low [27]. This makes the nursing home

527 setting a particularly difficult one in which to implement change and improvement.

528

529 *Potential solutions*

530 Strategies that could potentially have been useful include formalising the buddy role into a

531 co-facilitation role and having two IFs per home. Given the geographical distance between

532 sites and between the EFs and IFs, the EFs did not have an opportunity to make site visits, to

533 meet with staff and managers and get a sense of the context in which the IFs were working.

534 Furthermore, there was no face-to-face contact between the IFs and the EFs between the

535 start and end of the intervention. This is different to how a typical EF-IF model would

536 operate, where part of the mentoring relationship would involve direct contact. Having a

537 more experienced facilitator available within individual countries could have provided a

538 valuable bridge between the EF and the IFs and also addressed language barriers where

539 they arose [28]. A short closing event at the end of each programme was negotiated by the

540 EFs at the request of remaining IFs who wanted to share and celebrate their successes and

541 the difficulties they had overcome. But, aAt the least, building in a mid-point face-to-face

542 meeting would have been beneficial and helped to maintain engagement with the study.

543

544 Another factor influencing engagement was the level of managerial support. The EFs had no

545 contact with the managers in the care setting, either at an operational or strategic level. The

546 IF-manager relationship emerged as an important finding [29] and is an area where the EFs

547 could usefully have made some input, for example, through inviting managers to some of

548 the teleconference meetings or having separate information and discussion sessions

549 scheduled with managers to increase their understanding and sense of engagement with

550   the study. This is supported by other implementation studies, which demonstrate the

551   significance of the manager's role in implementing evidence-based practice in nursing home

552   settings [30, 31].

553

554   At one level, the solutions proposed indicate a need to add more to what could already be

555   seen as resource-intensive interventions. However, notwithstanding the fact that facilitation

556   as an implementation strategy involves investment in people and processes, we would

557   argue that it is not necessarily about adding in more. Rather, we suggest it is about doing

558   things differently, particularly within the context of an implementation research study.

559

560   *Addressing issues of fidelity and adaptation*

561   Turning to the fidelity-adaptation question, the PARIHS framework emphasises that

562   implementation is multi-faceted and non-linear. Our experience in FIRE mirrors other

563   studies that have started with a prior theory that recognises implementation as complex,

564   but face challenges handling complexity in a research context [32]. For both Type A and B

565   interventions, progress with implementation was generally less than anticipated and a

566   number of barriers were encountered. In some cases, the EFs took action to address these

567   obstacles by making adaptations, for example, providing expert continence input and

568   adjusting the audit schedule in the Type A intervention; and revisiting team values and

569   working with the IFs to engage the buddy in Type B sites. However, more substantive

570   adaptation or tailoring of the interventions, such as varying the amount and level of support

571   provided at an individual site level in response to specific difficulties that IFs encountered

572   was not undertaken in an attempt to maintain fidelity to the 'dose' of facilitation specified

573   in the logic pathway. This was compounded by the restrictions inherent in running a multi-

574 site European trial; for example, the practicalities of increasing face to face contact time

575 between EFs and IFs. Overall, this created a source of tension for EFs as it required a way of

576 working that did not mirror how the role functions in the real world.

577

578 The fidelity-adaptation debate is one that is increasingly recognised within complex

579 intervention and implementation research studies where context is an important mediating

580 factor [4, 33]. One approach put forward is to identify the core and peripheral (adaptable)

581 components of the intervention to provide clarity around which elements of an intervention

582 can and cannot be subject to tailoring [34]. In our conceptualisation of fidelity within FIRE,

583 dose represented a core component of the facilitation interventions. An alternative

584 approach would have been to focus fidelity on the intended mechanisms of action, as

585 opposed to the component parts of the intervention. This mechanism-focused perspective

586 on fidelity is one that has been more widely adopted in the field of health promotion and

587 prevention, where interventions subject to evaluation are similarly complex and emergent

588 [35, 36]. Taking this approach, intervention integrity is defined functionally in relation to fit

589 with the theory or principles underpinning the intervention.

590

591 Applying this thinking to facilitation, the emphasis would be less on the dose (e.g. a 3 or 5-

592 day residential development programme; 12 or 16 virtual teleconferences) and more on the

593 intended function or purpose of the component. For example, in the case of the initial

594 development programme, the function would be to build skills and knowledge specific to

595 Type A or B facilitation. Similarly if an intended mechanism was to develop confidence in

596 facilitation within the care setting, the focus would not be on how much time was allowed

597 to achieve this; rather the dose of time, and detailed activities undertaken, would be flexible

598　to enable tailoring to circumstances at a local level, including, for example, specific

599　strategies to involve and engage nursing home leaders and managers. Such an approach

600　clearly poses logistical challenges in the context of managing an externally funded research

601　study with time and resource constraints. As others have commented, "There is a tension

602　between fidelity and adaptation that cannot be resolved easily or simply" [37](p.2);

603　however, we believe there was a need to achieve a better balance between these two

604　concepts within the FIRE study.

605

606　*Reflections and lessons learned*

607　Reflecting on the practical and methodological challenges that we encountered developing,

608　delivering and supporting the facilitation interventions with the FIRE study – and with the

609　benefit of hindsight - what have we learned and what are the things we would do differently

610　if starting out again?

611

612　One of the significant issues highlighted from our analysis is the fundamental importance of

613　the relational aspects of facilitation and the need for individuals in a facilitator role to be

614　well supported and mentored. The findings have also led us to reflect on the distinction

615　made between Type A and B facilitation. In practice, this distinction could be seen as an

616　arbitrary one as there is a need to adopt the right methods for the right person at the right

617　time and in the right context. This suggests that more blended approaches to facilitation are

618　required, focused around core relational elements. This concurs with recent analyses which

619　relate the mechanisms of action of facilitation to higher-order learning, by way of making

620　connections, dialogue and sense-making [10, 38].

621

622   We cannot provide a definitive answer as to whether facilitation was the most appropriate

623   implementation intervention to adopt. As many other implementation studies have shown,

624   there are no easy solutions to changing practice in challenging contexts and there is much

625   still to learn about how best to develop, deliver and research tailored implementation

626   strategies. The findings from this study, coupled with the process evaluation from FIRE,

627   provide us with a conceptual platform for further investigation.

628

629   Figure 4 summarises theprovides a summary of our reflections on the key lessons learned

630   and implications for future research.

631

632   **Conclusions**

633   Evaluating an intervention such as facilitation that is inherently fluid and dynamic within the

634   methodology of an RCT is complex and challenging, particularly in terms of managing the

635   issue of fidelity versus adaptation. In future studies of this nature, we would suggest a

636   theoretical approach to fidelity, with a focus on mechanisms, informed by more prospective

637   use of process evaluation data. At a practical level, relational aspects of facilitation are

638   critically important. Iit is essential to recruit and retain individuals with the appropriate set

639   of skills and characteristics, explicit support from managerial leaders and accessible

640   mentorship from more experienced facilitators at a local level. Future research to examine

641   the context-facilitation dynamic would help add to the knowledge base on how facilitation

642   approaches can most effectively support implementation and the implementation research

643   agenda in healthcare.

644
645

Declarations

Ethics approval and consent to participate

Ethical Committee approval was obtained in England (10/WSE04/20), Sweden (2009/1806-31/2), and Republic of Ireland (ECM4(u)02/03/10). In the Netherlands, researchers followed advice to get permission from either an ethical committee at site level, or where this did not exist, from a scientific or residents committee at the site (HAZ-11087777-JGS). Research Governance approval was also obtained in England and permission to collect data at the sites obtained in Sweden and Republic of Ireland.

Consent for publication

Consent form allowed the use of anonymised quotations in publications.

Availability of data and materials

The datasets generated or analysed during the current study are not publically available because consent to make data publically available was not part of the consent by participants.

Competing interests

AK, GH and BMc were involved in the development of the PARIHS framework.

Authors' contributions

All authors contributed to the development and writing of the manuscript.

EL led the initial data analysis and drafting of findings.

GH and BMc produced subsequent drafts of the manuscript.

All authors provided critical commentary on drafts and read and approved the final manuscript.

References

1. Seers K, Cox K, Crichton N, Edwards R, Eldh A, Estabrooks C, et al. FIRE (Facilitating Implementation of Research Evidence): a study protocol. Implement Sci. 2012;7(1):25.
2. Seers K, Rycroft-Malone J, Cox K, Crichton N, Edwards R, Eldh A, et al. Facilitating Implementation of Research Evidence (FIRE): a randomised controlled trial evaluating two models of facilitation informed by the Promoting Action on Research Implementation in Health Services (PARIHS) Framework. Implement Sci. In review.
3. Rycroft-Malone J, Seers K, Eldh A, Cox K, Crichton N, Harvey G, et al. A realist process evaluation with a randomised controlled trial evaluating facilitation: an exemplar. Implement Sci. In review.
4. Pinnock H, Barwick M, Carpenter CR, Eldridge S, Grandes G, Griffiths CJ, et al. Standards for Reporting Implementation Studies (StaRI) Statement. BMJ. 2017;356.
5. Kitson A, Harvey G, McCormack B: Enabling the implementation of evidence based practice: a conceptual framework. Qual Health Care. 1998;7:149-159.
6. Rycroft-Malone J, Kitson A, Harvey G, McCormack B, Seers K, Titchen A: Ingredients for change: revisiting a conceptual framework. Qual Saf Health Care. 2002;11:174-80..
7. Kitson A, Rycroft-Malone J, Harvey G, McCormack B, Seers K, Titchen A. Evaluating the successful implementation of evidence into practice using the PARIHS framework: theoretical and practical challenges. *Implement Sci.* 2008;3:1.
8. Rogers CR. Freedom to Learn - A View of What Education Might Become. Columbus, Ohio: Charles Merrill;1969.
9. Heron J. The Facilitator's Handbook. London: Kogan Page;1989.
10. Berta W, Cranley L, Dearing JW, Dogherty EJ, Squires JE, Estabrooks CA. Why (we think) facilitation works: insights from organizational learning theory. Implement Sci. 2015; 10:141.
11. Hogan C. Understanding Facilitation: Theory and Principles. London: Kogan Page;2002.
12. McCormack B, Manley K, Titchen A. Practice Development in Nursing and Healthcare (2nd edition) Oxford: John Wiley & Sons;2013.
13. Harvey G, Loftus-Hills A, Rycroft-Malone J, Titchen A, Kitson A, McCormack B, Seers K: Getting evidence into practice: the role and function of facilitation. J Adv Nurs. 2002; 37(6):577-88.
14. Liddy C, Laferriere D, Baskerville B, Dahrouge S, Knox L, Hogg W. An overview of practice facilitation programs in Canada: current perspectives and future directions. Healthc Policy. 2013;8(3):58-67.
15. Knox L, Taylor E, Geonnotti K, Machta R, Kim J, Nysenbaum J, Parchman M. Developing and Running a Primary Care Practice Facilitation Program : A How-to Guide. Rockville, MD: Agency for Healthcare Research and Quality;2011.
16. Harvey G, Oliver K, Humphreys J, Rothwell K, Hegarty J. Improving the identification and management of chronic kidney disease in primary care: lessons from a staged improvement collaborative. Int J Qual Health Care. 2015;27(1):10-16.
17. Baskerville NB, Liddy C, Hogg W. Systematic review and meta-analysis of practice facilitation within primary care settings. Ann Fam Med. 2012;10(1):63-74.
18. Persson LA, Nga NT, Malqvist M, Thi Phuong Hoa D, Eriksson L, Wallin L *et al.* Effect of Facilitation of Local Maternal-and-Newborn Stakeholder Groups on Neonatal Mortality: Cluster-Randomized Controlled Trial. PLoS Med. 2013;10(5):e1001445.
19. Harvey G, Kitson A. Implementing Evidence-Based Practice in Healthcare: A facilitation guide. Abingdon, Oxon: Routledge;2015.
20. Harvey G, Hegarty J, Humphreys J, Rothwell K, Kislov R, Entwistle V, Boaden R. Facilitation methods within a project to improve the management of chronic kidney disease in primary care. In: Implementing Evidence-Based Practice in Healthcare: A facilitation guide. Edited by Harvey G, Kitson A. Abingdon, Oxon: Routledge; 2015:115-133.

21.   Stetler CB, Damschroder LJ, Helfrich CD, Hagedom HJ. A guide for applying a revised version of the PARIHS framework for implementation. *Implement Sci.* 2011;6(1):99

22.   Habermas J. Knowledge and human interests (J. J. Shapiro, Trans.). London: Heinemann;1972.

23.   Fay B. Critical social science. Cambridge: Polity Press;1987.

24.   McCormack B, Titchen A. Critical creativity: melding, exploding, blending. Educ Action Res. 2006;14(2):239-66.

25.   McCormack B, Wright J, Dewar B, Harvey G, Ballantine K. A realist synthesis of evidence relating to practice development: findings from the literature analysis. Practice Development in Health Care. 2007;6(1):25-55.

26.   Harvey G, Kitson A, Munn Z. Promoting continence in nursing homes in four European countries: the use of PACES as a mechanism for improving the uptake of evidence-based recommendations. Int J Evid Based Healthc. 2012;10(4):388-96.

27.   Low L-F, Fletcher J, Goodenough B, Jeon Y-H, Etherton-Beer C, MacAndrew M, *et al.* A Systematic Review of Interventions to Change Staff Care Practices in Order to Improve Resident Outcomes in Nursing Homes. PLoS One. 2015;10(11):e0140711.

28.   Kitson AL, Harvey G. Methods to Succeed in Effective Knowledge Translation in Clinical Practice. J Nurs Scholarsh. 2016;48(3):294-302.

29.   van der Zijpp TJ, Niessen T, Eldh AC, Hawkes C, McMullan C, Mockford C, *et al*. A Bridge Over Turbulent Waters: Illustrating the Interaction Between Managerial Leaders and Facilitators When Implementing Research Evidence. Worldviews Evid Based Nurs. 2016;13(1):25-31.

30.   Mekki TE, Øye C, Kristensen B, Dahl H, Haaland A, Nordin KA, *et al*. The inter-play between facilitation and context in the Promoting Action on Research Implementation in Health Services Framework: A qualitative exploratory implementation study embedded in a cluster randomized controlled trial to reduce restraint in nursing homes. J Adv Nurs. 2017; 73(11):2622-32.

31.   Gifford WA, Davies B, Edwards N, Griffin P, Lybanon V. Managerial leadership for nurses' use of research evidence: an integrative review of the literature. *Worldviews Evid Based Nurs* 2007;4(3):126-45.

32.   Marshall M, de Silva D, Cruickshank L, Shand J, Wei L, Anderson J. What we know about designing an effective improvement intervention (but too often fail to put into practice). BMJ Qual Saf. 2016;26(7):578-82.

33.   Masterson-Algar P, Burton CR, Rycroft-Malone J, Sackley CM, Walker MF. Towards a programme theory for fidelity in the evaluation of complex interventions. J Eval Clin Pract. 2014;20(4):445-52.

34.   Denis JL, Hebert Y, Langley A, Lozeau D, Trottier LH. Explaining diffusion patterns for complex health care innovations. Health Care Manage Rev. 2002;27(3):60-73.

35.   Bauman LJ, Stein RE, Ireys HT. Reinventing fidelity: the transfer of social technology among settings. Am J Community Psychol. 1991;19(4):619-39.

36.   Hawe P, Shiell A, Riley T. Complex interventions: how "out of control" can a randomised controlled trial be? BMJ. 2004;328:1561-3.

37.   Morrison DM, Hoppe MJ, Gillmore MR, Kluver C, Higa D, Wells EA. Replicating an intervention: the tension between fidelity and adaptation. AIDS Educ Prev. 2009;21(2):128-40.

38.   Masso M, McCarthy G, Kitson A. Mechanisms which help explain implementation of evidence-based practice in residential aged care facilities: A grounded theory study. Int J Nurs Stud. 2014;51(7):1014-26.

Figure 1: Facilitation continuum

Figure 2: Criteria provided to study sites to guide the selection of internal facilitators (IFs)

Figure 3: Logic pathway of facilitation intervention

Figure 4: Lessons learned and implications for future research