

Pharmacy and medical student interprofessional education placement week.

JEBARA, T., THOMAS, I., CUNNINGHAM, S. and RUSHWORTH, G.F.

2022

This is the peer reviewed version of the following article: JEBARA, T., THOMAS, I., CUNNINGHAM, S. and RUSHWORTH, G.F. 2022. Pharmacy and medical student interprofessional education placement week. Clinical teacher [online], 19(2), pages 143-149, which has been published in final form at <https://doi.org/10.1111/tct.13450>. This article may be used for non-commercial purposes in accordance with Wiley Terms and Conditions for Use of Self-Archived Versions. This article may not be enhanced, enriched or otherwise transformed into a derivative work, without express permission from Wiley or by statutory rights under applicable legislation. Copyright notices must not be removed, obscured or modified. The article must be linked to Wiley's version of record on Wiley Online Library and any embedding, framing or otherwise making available the article or pages thereof by third parties from platforms, services and websites other than Wiley Online Library must be prohibited.

1 **Pharmacy and medical student interprofessional education**

2 **placement week**

3

4 **Authors**

5 Tesnime Jebara¹, Ian Thomas², Scott Cunningham¹, Gordon F Rushworth^{3*}

6

7 ¹School of Pharmacy & Life Sciences, Robert Gordon University, Aberdeen,
8 United Kingdom, AB10 7GJ

9 ²Highland Medical Education Centre, Centre for Health Science, Inverness,
10 United Kingdom, IV2 3JH

11 ³Highland Pharmacy Education and Research Centre, Centre for Health
12 Science, NHS Highland, Inverness, United Kingdom, IV2 3JH

13

14 **Correspondence to**

15 Gordon F Rushworth

16 Highland Pharmacy Education & Research Centre

17 Centre for Health Science, NHS Highland, Inverness, UK, IV2 3JH

18 Tel +44 (0) 1463 255036

19 Email gordon.rushworth@nhs.scot

20

21 Abstract: 227 words

22 Manuscript: 1587

23 **Authors' contributions**

24 Dr Tesnime Jebara meets conditions 1, 2, 3 and 4. She led the collection
25 and analysis of data in addition to the write-up of the manuscript and
26 approving it for publication. She agrees to be accountable for all aspects of
27 the work.

28

29 Ian Thomas meets conditions 1, 3 and 4. He led the conception and
30 planning of the project and was involved in approving the manuscript for
31 publication. He also agrees to be accountable for all aspects of the work.

32

33 Prof Scott Cunningham meets conditions 1, 2, 3 and 4. He led the collection
34 and analysis of data and was involved in drafting the manuscript as well as
35 approving it for publication. He also agrees to be accountable for all aspects
36 of the work.

37

38 Gordon F Rushworth meets conditions 1, 2, 3 and 4. He led the conception
39 and planning of the project and was involved in the interpretation of data,
40 the write-up of the manuscript and submission for publication. He also
41 agrees to be accountable for all aspects of the work.

42

43

44 **Pharmacy and medical student interprofessional education**

45 **placement week**

46

47 **Abstract**

48 **Background:** Developing collaborative practice through interprofessional
49 education activities (IPE) in undergraduate healthcare curricula is advocated
50 by the World Health Organisation and the regulatory bodies for Medicine
51 and Pharmacy within the UK.

52

53 **Approach:** Our local faculty, comprising educators from within the Highland
54 Pharmacy Education & Research Centre (HPERC) and Highland Medical
55 Education Centre (HMEC) developed a five-day IPE placement for pharmacy
56 and medical students on clinical placement within NHS Highland.

57

58 **Evaluation:** We collected qualitative evaluation data using face-to-face
59 focus group discussions with five pharmacy and four medical students
60 (January 2020 cohort). Three key categories and multiple themes within
61 each category were identified from participant narratives. Category 1:
62 overall perception of experience – (themes: better than previous IPE
63 experience; greater exposure to clinical pharmacy). Category 2: student
64 interactions – (themes: learning with a buddy; understanding of
65 interprofessional roles). Category 3: suggestions for improvement –
66 (themes: choice of relevant clinical rotation and content; increase learning
67 from clinical pharmacists; better orientation to placement). Overall,
68 students valued their participation during this week and reported many

69 benefits of learning with students from another profession. Students also
70 highlighted suggestions to improve their learning experience.

71

72 **Implications:** This evaluation has indicated students' support for
73 embedding interprofessional placements into their curricula. Clinical
74 educators should consider designing similar placements, while further work
75 should focus on inclusion of higher student numbers and look to include a
76 range of professions and practice settings.

77

78 **Keywords:** Interprofessional education, multidisciplinary communication,
79 pharmacy education, medical education

80

81 **Competing Interests:** None to declare

82

83 **Funding:** This study was funded by the Highland Pharmacy Education &
84 Research Centre

85

86

87 **Background**

88 There is global interest in interprofessional education (IPE) to ensure
89 collaborative and harmonious patient care delivery. According to Fransworth
90 et al,¹ IPE first emerged in the United States and United Kingdom in the
91 1960s-1970s but gained more popularity following the publication of two
92 World Health Organisation reports; Continuing Education for Physicians² and
93 Learning Together to Work Together for Health³.

94

95 The Centre for the Advancement of Interprofessional Education (CAIPE)
96 defines interprofessional education as “occasions when two or more
97 professions learn with, from and about each other to improve collaboration
98 and the quality of care”.⁴ Preparing students for collaborative practice is
99 taking on ever-increasing importance in undergraduate healthcare
100 education. It gives students from different healthcare backgrounds the
101 chance to learn together to better prepare them for working in
102 multidisciplinary teams upon graduation. Regulators are calling for more
103 interprofessional learning opportunities during undergraduate curricula.^{5, 6}

104

105 Many countries across the world have taken steps to embed
106 interprofessional placements into their curricula such as in the United
107 States⁷⁻⁹, Australia¹⁰, UK¹¹, Canada¹², and The Netherlands¹³. Literature
108 highlights many benefits of IPE including; understanding roles,⁷ readiness
109 for teamworking,¹⁰ and taking a more active role in delivering care¹³.

110

111 While local MBChB and MPharm courses contain elements of IPE, these are
112 limited to non-clinical settings and there is no current opportunity for IPE
113 clinical placements of a sizable duration.

114

115 In this article, we aim to describe and present an initial evaluation of an IPE
116 experiential learning clinical placement for pharmacy and medical students.

117

118 **Approach**

119 We designed a week-long placement within an existing 4th year MBChB
120 placement block (cardiovascular, clinical pharmacology, vascular surgery,
121 and respiratory block) in Raigmore Hospital, Inverness. There was no
122 selection process for medical students as they were already due to be on
123 placement. However, we invited all 3rd and 4th year pharmacy students to
124 apply to attend, then convened a panel to review the applications. We
125 selected the top ranked pharmacy students and allocated placement dates
126 in order of student preference.

127

128 At the start of the placement, we introduced the medical and pharmacy
129 students to each other then buddied them into pairs. The placement
130 coordinator then discussed the learning objectives (see box 1), timetabled
131 activities, assessments, and answered any questions.

132

133 [Insert Box 1]

134

135 During the week, the students were given ample time for clinical experience
136 with opportunity to attend ward rounds, outpatient clinics, investigations,
137 and interventions such as bronchoscopy, PCI or vascular surgery (depending
138 on clinical specialty). The IPE week also offered additional clinical learning
139 opportunities such as attending wards with clinical pharmacists.

140

141 We delivered a number of tutorials over the course of the week which were
142 attended jointly by the students. The multidisciplinary faculty who taught
143 during the week included physicians, surgeons, and pharmacists. Students
144 were provided with case studies and, within their pairs, were asked to
145 jointly produce a PowerPoint presentation typically focusing on clinical
146 therapeutic management.

147

148 The students also completed mini-Clinical Evaluation Exercises (mini-CEX)
149 in their pairings. This was a formative assessment where we observed
150 students taking a clinical history from a patient on a ward setting. The
151 medical student was asked to open the history and explore the presenting
152 complaint, history of presenting complaint and past medical history before
153 the pharmacy student took over to complete the history, including the drug
154 history. At the end of the mini-CEX, we conducted verbal debrief and
155 provided written feedback to each of the students. Learning points were
156 linked back to the learning objectives of the IPE week as well as picking out
157 some of the specific learning points from the individual cases.

158

159 Finally, the week culminated in a ward-based immersive simulation,
160 conducted within the Highland Clinical Skills Centre, where the students
161 “acted-up” as qualified junior pharmacists and doctors. Within their pairs,
162 the students were given an orientation to the simulation ward setting,
163 including the equipment, the simulated patient and documentation available
164 as well as the nurse (confederate). We designed the simulation scenario,
165 with defined learning objectives, such that the students were required to
166 work together to get through the simulation. At the end of the scenario, the
167 students were debriefed on their experience by the placement coordinator.

168

169

170 **Evaluation**

171 To explore students’ views and experiences with the IPE week, we invited
172 all pharmacy and medical students of the January 2020 IPE week cohort to
173 participate in focus groups at the end of their placement.

174

175 We applied the Kirkpatrick Four-Level Training Evaluation Model¹⁴ (see box
176 2) when designing the evaluation so as to objectively determine the impact
177 of training programmes and their effectiveness. The model is based on four
178 levels; reaction, learning, behaviour and results. The current evaluation of
179 the Highland IPE week focused on Levels 1 and 2.

180 [Insert Box 2]

181

182 *Sample and recruitment*

183 Prior to the start of their placement, all medical and pharmacy students who
184 were expected to attend the January 2020 delivery (n=10) were emailed by
185 the placement coordinator inviting them to participate in the focus groups
186 and informing them of their times and locations if they wish to participate.

187

188 Data generation

189 We devised a focus group topic guide based on our experience and
190 published literature, and underpinned by the Theoretical Domains
191 Framework (TDF)¹⁵. The TDF summarises key elements of 33 theories and
192 proposes that determinants of behaviour cluster into 14 domains. Those
193 domains most relevant (e.g. knowledge, beliefs about capabilities and
194 consequences, motivation and goals, environmental context and resources)
195 were used to guide construction of interview core questions. TJ piloted the
196 questions in an informal educational feedback session on a previous cohort
197 of students and changes / modifications were made. As shown in Box 3, the
198 final set of questions focused on exploring students' views and experiences
199 within the IPE week in general.

200 [Insert Box 3]

201

202 We conducted two focus groups to allow for honest reflection within each
203 professional group; one with medical and one with pharmacy students. All
204 focus groups were approximately 60 minutes in duration and were
205 conducted face-to-face in Inverness by a trained researcher (TJ). The focus
206 groups were recorded and transcribed verbatim and checked for accuracy of
207 transcribing prior to analysis.

208

209 Data analysis

210 We undertook thematic analysis of the data using the TDF and the interview
211 schedule as thematic guides. Analysis was performed by two research
212 members independently with any disagreements resolved through
213 discussion. In reporting this study, the Consolidated Criteria for Reporting
214 Qualitative Studies (COREQ) was followed.

215

216 Ethics and governance

217 The evaluation protocol received approval from the ethical review panel of
218 the School of Pharmacy and Life Sciences at Robert Gordon University and
219 adhered to all relevant research governance and ethics policies including the
220 Declaration of Helsinki (1964). Informed consent was collected from all
221 interviewees prior to commencing the focus groups.

222

223 Results

224 Two 60-minute focus groups were conducted; one with pharmacy (n=5)
225 and another with medical (n=4) students. One medical student was unable
226 to attend the focus group due to illness.

227

228 We identified multiple key themes from participant narratives, which we
229 mapped under three categories. Category 1: overall perception of
230 experience – (themes: better than previous IPE experience; greater
231 exposure to clinical pharmacy). Category 2: student interactions –
232 (themes: learning with a buddy; understanding of interprofessional roles).

233 Category 3: suggestions for improvement – (themes: choice of relevant
234 clinical rotation and content; increase learning from clinical pharmacists;
235 better orientation to placement). These categories and themes are explored
236 in more detail in Table 1. Overall, students reported that the Highland IPE
237 week was more beneficial when compared to previous IPE events. They
238 believed that this week allowed them to consolidate knowledge gained from
239 their degrees and get exposed to new experiences (such as clinical
240 pharmacy for medical students). Students also reported that, as a pair, they
241 were able to learn better about patient care in general and about each
242 other’s profession and are subsequently better prepared for a more
243 collaborative practice in the future. However, they did express a desire to
244 change the clinical area where the placement will be conducted in future, to
245 allow both students to gain the most out of this week. Time spent with
246 clinical pharmacists was highly valued by all students who encouraged
247 embedding more of it in future placements.

248

249 [Insert Table 1]

250

251 **Implications**

252 Due to coronavirus complications, data were only collected from one cohort
253 (January 2020) thus results should be interpreted with caution.

254

255 The IPE placement was well-perceived by students who highlighted its
256 impact on improving their learning experience and providing insight into
257 their future practice. As a result of this evaluation, we have made some

258 changes to the design of the placement week; in particular, it has been
259 offered to students as part of a long-term conditions block hosted in an
260 older adults unit. There was thought to be plenty of scope for both sets of
261 students to optimise the interprofessional placement learning opportunity
262 within this clinical specialty. Three one-week placements are planned for the
263 coming academic year and all have successfully recruited students.

264

265 The authors recommend that other Schools of Pharmacy and Medicine
266 consider co-production of similar IPE placements and then embed these
267 within their curricula in an effort to better prepare students for real-life
268 collaborative practice. Particular attention should be paid to the hosting
269 specialty and how to ensure sufficient patient contact for all students given
270 increased student numbers in clinical areas. We also recommend having a
271 robust plan for the orientation of students arriving on placement. Beyond a
272 geographical orientation of the placement site for all students, faculty
273 should set expectations of how students will communicate and work to help
274 each other through the week, giving examples of how the students could
275 get the most from their placement.

276

277

278

- 280 1. Fransworth TJ, Seikel JA, Hudock D, Holst J. History and
281 Development of Interprofessional Education. *J Phonet and Audiol*
282 2015;1(101).
- 283 2. World Health Organisation. Continuing education for physicians:
284 report of a WHO Expert Committee. *World Health Organ Tech Rep*
285 *Ser* 1973;534:1-32.
- 286 3. World Health Organisation. Learning together to work together for
287 health. Report of a WHO Study Group on Multiprofessional Education
288 of Health Personnel: The Team Approach. *World Health Organ Tech*
289 *Rep Ser* 1988;769:1-72.
- 290 4. Centre for the Advancement of Interprofessional Education.
291 Interprofessional Education (CAIPE): Today, Yesterday and
292 Tomorrow. Available at:
293 [https://www.caipe.org/resources/publications/caipe-](https://www.caipe.org/resources/publications/caipe-publications/caipe-2002-interprofessional-education-today-yesterday-tomorrow-barr-h)
294 [publications/caipe-2002-interprofessional-education-today-yesterday-](https://www.caipe.org/resources/publications/caipe-2002-interprofessional-education-today-yesterday-tomorrow-barr-h)
295 [tomorrow-barr-h](https://www.caipe.org/resources/publications/caipe-2002-interprofessional-education-today-yesterday-tomorrow-barr-h). Accessed Feb/11, 2020.
- 296 5. Standards for the initial education and training of pharmacists.
297 Available at:
298 [https://www.pharmacyregulation.org/sites/default/files/document/sta](https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-initial-education-and-training-of-pharmacists-january-2021_0.pdf)
299 [ndards-for-the-initial-education-and-training-of-pharmacists-january-](https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-initial-education-and-training-of-pharmacists-january-2021_0.pdf)
300 [2021_0.pdf](https://www.pharmacyregulation.org/sites/default/files/document/standards-for-the-initial-education-and-training-of-pharmacists-january-2021_0.pdf). Accessed Jan/20th, 2021.
- 301 6. Achieving good medical practice: guidance for medical students.
302 Available at: [https://www.gmc-uk.org/-/media/documents/achieving-](https://www.gmc-uk.org/-/media/documents/achieving-good-medical-practice-20200729_pdf-66086678.pdf)
303 [good-medical-practice-20200729_pdf-66086678.pdf](https://www.gmc-uk.org/-/media/documents/achieving-good-medical-practice-20200729_pdf-66086678.pdf). Accessed
304 March/3rd, 2021.
- 305 7. Biehle L, Mann A, Fox L. Evaluation of pharmacy student perceptions
306 and stereotypes of healthcare professionals before and after an
307 internal medicine advanced pharmacy practice experience. *Curr*
308 *Pharm Teach Learn* 2019;11(4):417-23.
- 309 8. Nwaesei AS, Jacob BC, Peasah SK, Perkins JJ, Hogan M. A Structured
310 Approach to Intentional Interprofessional Experiential Education at a
311 Non-Academic Community Hospital. *Am J Pharm Educ*
312 2019;83(9):7365.
- 313 9. Caratelli LA, Bostwick JR, Templin T, Fitzgerald M, Filter MS, Ginier E.
314 Development and evaluation of an interprofessional seminar pilot
315 course to enhance collaboration between health professions at a
316 student-run clinic for underserved populations. *J Interprof Care*
317 2020;34(3):422-6.
- 318 10. Seaman K, Saunders R, Williams E, Harrup-Gregory J, Loffler H, Lake
319 F. An examination of students' perceptions of their interprofessional
320 placements in residential aged care. *J Interprof Care*
321 2017;31(2):147-53.
- 322 11. Nasir J, Goldie J, Little A, Banerjee D, Reeves S. Case-based
323 interprofessional learning for undergraduate healthcare professionals
324 in the clinical setting. *J Interprof Care* 2017;31(1):125-8.

- 325 12. Doucet S, Loney E, Brown PA. Perceptions of graduating health
326 professional students of their interprofessional education experiences
327 during pre-licensure education. *J Allied Health* 2016;45(2):e5-9.
- 328 13. Visser CLF, Kusurkar RA, Croiset G, Ten Cate O, Westerveld HE.
329 Students' motivation for interprofessional collaboration after their
330 experience on an IPE ward: A qualitative analysis framed by self-
331 determination theory. *Med Teach* 2019;41(1):44-52.
- 332 14. Kirkpatrick DL, Kirkpatrick JD. *Evaluating Training Programs: The*
333 *Four Levels*. 3rd ed. Oakland: Berrett-Koehler Publishers; 2006.
- 334 15. Cane J, O'Connor D, Michie S. Validation of the theoretical domains
335 framework for use in behaviour change and implementation research.
336 *Implem Sci* 2012;7:37.

337
338

Box 1: The learning objectives for the IPE placement week

1. Demonstrate a deeper understanding of the role of other health care professionals.
2. Apply practical experience in the treatment and management of patients with cardiac, respiratory, vascular disease.
3. Analyse understanding of the importance of appropriate prescribing, including the practical problems of prescribing, including the use of Personal Formularies.

340

Box 2: The Kirkpatrick Four-Level Training Evaluation Model	
<ul style="list-style-type: none">• Level 1 – Reaction; relates to how training was valued by participants and how engaged they were with it.• Level 2 – Learning; relates to the benefits acquired as a result of the training in terms of developed skills, attitudes, knowledge, and confidence.• Level 3 – Behaviour; relates to the extent to which participants apply their training often in real life situations.• Level 4 – Results; relates to the extent to which the training has impacted outcomes relevant to an organisation.	

341

342

Box 3: Focus Group Topic Guide

- Overall, how would you describe your experience?
- What were the positive aspects of this week? Anything you particularly liked?
- What about the negatives?
- Have you been on other placements? How does this one compare? What are the biggest differences then between this placement and other placements that you've been on?
- What are your views of the different activities you were involved in this week?
- Is there anything you would like to be changed (added or removed) to improve your experience during this week?
- How did you get along with your partner?
- Did you feel you learned more/better because you were with them? How, if at all, did working with him or her influence your learning?
- How do you think this experience would impact your future practice? Did you learn anything that you would like to implement in any future placements/career?
- As a result of taking part in this week, do you think you are now more confident to go and talk to other people (other healthcare professionals, patients ...etc.)?
- Do you think the week has changed your understanding of the role of a pharmacist/doctor? In what way?
- Would you recommend this type of teaching as a way of learning?

Table 1: Key themes identified from qualitative evaluation data			
Category	Theme	Definition	Quotes
(1) Overall perception of experience	Better than previous IPE experience	Students noted that it was better than any previous IPE experience they had as it was the first time they were allowed to work alongside another healthcare student in a real-life practice.	<p>"This doesn't even compare to previous IPE that I felt was completely pointless in the past because we basically just did team building exercise and then never saw the people again. I think this was better." M3</p> <p>"They were just showing us what they do on a day-to-day basis... Usually when you go on a placement, they will have a list of things... and it's not probably what they have actually in their day-to-day." P3</p>

	<p>Greater exposure to clinical pharmacy</p>	<p>Medical students were particularly impressed with clinical pharmacists and how they were able to learn a lot from them.</p> <p>The week was also praised by students as it allowed them to experience things they would not have exposure to otherwise during their studies.</p>	<p>"She was speaking to me about a few different resources... and how I could get in contact with a pharmacist if I needed help prescribing something, and so that was good because I didn't know those services were available." M4</p> <p>"Another good bit I thought was the tutorials we did because they had more of a pharmacology focus, which we don't normally get, but it's still really important." M4</p> <p>"We've had a couple of tutorials with the pharmacists [before] but nothing like this week. This week has been by far the best pharmacology teaching." M1</p> <p>"I was able to sit through a surgery... and that's something, without IPE, I wouldn't have been able to experience, like at all." P5</p> <p>"We got to see a lot of conversation between the doctors and occupational health in terms of managing patients at home... We have seen a lot of IPE-type [sic interprofessional] things going on between referring to different services all over the highlands." P3</p> <p>"I feel like I probably could tell you a lot more now than what I would from what were taught at uni, so as much as I understood it then, my understanding is completely different." P3</p>
--	--	---	--

(2) Student interactions	Learning with a buddy	<p>Students from both professions enjoyed doing this placement together and reported that, as a result, they were able to learn better.</p> <p>Being paired with a medical student was considered beneficial to help pharmacy students interact with them without feeling intimidated.</p>	<p>"I quite enjoyed having her there, I got on with her, and when we did a history together, it worked really well." M2</p> <p>"I learned so much from medical student just like a lot of terms that came up... and then I would then explain the pharmacology... so we've been able to just kind of do half and half to get the whole picture." P1</p> <p>"I think it's quite healthy to integrate us because in a few years we all will be working together, and I think that mixing us in early is a good thing to do." M2</p> <p>"It was nice being with medical students, because they're students as well, there's still stuff that they're learning, so talking to them about different things, it didn't feel uncomfortable." P3</p>
	Understanding of interprofessional roles	The week was also believed to help students better understand each other's profession and the different roles they can perform.	<p>"I chatted with [partner] quite a bit about pharmacy and their career routes and I learnt more about what they can do... we don't really cover that otherwise." M4</p> <p>"I think it's really nice to have that kind of peer environment... we've kind of built up a relationship of understanding what each other knows and doesn't know, and the benefits of discussing things together." P3</p>

(3) Suggestions for improvement	Choice of relevant clinical rotation and content	<p>Most students were placed in cardiovascular or respiratory wards except for one pair who were allocated to vascular surgery. This was considered a poor choice as pharmacists usually have little input in this area.</p> <p>Also, medical students did highlight that they had less clinical contact with patients compared to their regular placements.</p>	<p>"The pharmacists don't get taught anything about vascular surgery, so I felt kind of sorry for [partner] who I was with, she was put in a ward that has very little pharmacy input anyway." M1</p> <p>"Being on vascular [ward] felt quite out of joint almost, because there wasn't really much pharmacy side, so the medic was having to explain everything." P1</p> <p>"We certainly had far less contact time this week, I must say, but when you double the amount of students on a ward, I don't really think there's any way around that." M1</p>
	Increase learning from clinical pharmacists	Both medical and pharmacy students expressed interest in attending more clinical pharmacist wards and advocated for incorporating this into future placements as the current week was more focused on medical activities.	<p>"I was with [clinical pharmacist] for like 3 hours... I learned loads... I'd quite like to have stuff with the ward pharmacist." M2</p> <p>"Me and my medical student only saw a pharmacist today... it has been good for us to see the medical side, but I don't think the balance has been there with the medical students getting to see the pharmacy side." P4</p>
	Better orientation to placement	<p>In addition, students also pointed that they require a better introduction to the IPE week and the students they are partnering with.</p> <p>One medical student noted that sometimes they had to take on a more mentoring role than anticipated.</p>	<p>"I think it was good, I would do it again, but again [needs] more structured approach and just 100% knowing what our role is, and what we're meant to do with it, would be helpful at introduction maybe." M3</p> <p>"She [student pharmacist] couldn't follow exactly what was going on, so at times, I would be trying to explain it. I wanted</p>

			to try and help them have a good time, but I don't know if that was our role." M4
--	--	--	---

