Does the structure of the medical consultation align with an educational model of clinical communication? A study of physicians' consultations from a postgraduate examination

Lorraine M Noble[1,2]*, Gianpaolo Manalastas[1,2], Rowena Viney[1], Ann E Griffin[1]

[1]UCL Medical School, University College London, London, UK

[2]Joint first authors

*Corresponding author at:

UCL Medical School, University College London, Gower Street, London, UK, Tel +44(0)20 3108 9223, Email lorraine.noble@ucl.ac.uk

ORCID ID: https://orcid.org/0000-0002-1105-7681

Author email addresses:

lorraine.noble@ucl.ac.uk

g.manalastas@alumni.ucl.ac.uk

r.viney@ucl.ac.uk

a.griffin@ucl.ac.uk

Objective

This study examined whether the structure of consultations in which physicians were tasked with *sharing information* corresponded to the chronological stages proposed by an established educational model of clinical communication.

Method

Seventy six simulated consultations from a postgraduate examination for general medical hospital physicians were transcribed verbatim and converted into diagrams showing consultation structure. All doctor-patient/relative talk was allocated into six phases: *Initiating, Gathering information, Summary, Explanation, Planning* and *Closing,* using the 'communication process skills' from the Calgary-Cambridge Guide to the Medical Interview.

Results

The majority of consultations included four or five of the expected phases, with most talk (41-92%) in *Explanation* and *Planning.* There was no discernible consistency of structure across the consultations or in consultations from the same scenario. Consultations varied in the presence, sequential order, size, location and reappearance of phases.

Conclusions

The structure of consultations in this standardised setting bore little resemblance to the chronological order of phases predicted by an educational model.

Practice implications

Educational guidance and interventions to support patients in preparing for consultations need to take account of doctors' behaviour in practice. Assumptions about the organisation of medical consultations should be queried in the absence of an evidence base.

1. Introduction

In their book *Meetings between experts*, Tuckett and colleagues proposed that both patient and doctor have an *agenda* for the consultation, in terms of goals for what will happen and hoped for outcomes [1]. In workplaces, meetings usually have an *explicit agenda* set by the host, often shared in the form of a *visible plan* that sets out the meeting structure. This enables participants to prepare the timing, content and quantity of their contributions. It has been proposed that the structure of the medical consultation is a *flexible 'scaffold'*, facilitating the accomplishment of the agenda [2]. Thus sharing a *template for consultation structure* with the patient can help the conversation to be focused and time efficient. Educational guidance recommends an *organised structure* for the consultation and strategies to *share the consultation plan* with patients [3-11]. This, however, raises the question: *what is the structure of the medical consultation?*

Consultation structure has been discussed in the 'descriptive' and 'prescriptive' literatures [12]. In their seminal observational research of recorded consultations in primary care, Byrne and Long identified six stages reflecting the core tasks of the interaction: *greeting and relating, discovering the reasons for attendance, conducting a verbal or physical examination or both, consideration of the condition, detailing further treatment,* and *terminating the interview* [13]. Although this suggested a natural sequence of consultation phases, Byrne and Long commonly found variation in the order, presence and frequency of stages. This partly related to the type of consultation: for example, a meeting with a patient returning for a repeat prescription would not include a diagnostic phase. However, doctors were also observed *omitting* phases that might be expected, such as moving immediately from gathering information about a new problem to describing treatment, with no intervening phase

mentioning the nature of the condition. Byrne and Long also observed *reversion* to earlier phases, which appeared to reflect a problem with the smooth progression of the consultation, indicating either that earlier tasks had not been adequately addressed or that the doctor was attempting to regain control.

Subsequent researchers have similarly construed the medical consultation as naturally comprising a chronological set of stages [12, 14-18]. Meeuwesen and colleagues noted that *"For the doctor, this sequencing pattern is a powerful device to structure the interview and to manage interactions within a limited time span"* [12]. Nonetheless, investigators have consistently observed consultations routinely failing to follow the expected order. Ten Have noted that the *"sequence is called 'ideal' because one observes many deviations from it that seem to be quite acceptable to participants"* [16]. Even in a study where the consultations might have been expected to be uniformly structured – because the doctors were filling out a questionnaire as the consultation unfolded – one investigator commented that *"It would be very difficult to reconstruct the written questionnaire on the basis of the tape-recorded interviews… not all interviews cover the same topics and by no means are all questions covered consistently across all interviews. The range of variability was, in fact, gross"* [15].

This tension between the *expectation* of a predictable structure and the *reality* of observed deviations has been considered in light of the type of interaction and behaviour of participants. Medical consultations have been described as a form of 'institutional talk' (or 'talk at work'). This refers to conversations which are goal-directed and include at least one participant present in a professional capacity [19,20]. 'Institutional' interactions (like courtroom proceedings, classroom teaching or marriage ceremonies) are characterised by a formulaic and predictable structure,

which is enacted through the professional participant having greater rights to control the topic and direction of the conversation. The resulting 'ritualization' of the meeting includes its organisation into sequential stages, which in a medical context is controlled by the doctor [21]. Indeed, this is evident in the naming of consultation phases, which routinely emphasise the *doctor's aims*, not the patient's, nor their joint goals.

Nevertheless, Ainsworth-Vaughan noted that 'conversational' discourse co-occurs alongside 'ritualized' discourse in medical encounters, increasing the unpredictability of structural organisation [21]. Drass applied a model of 'conflict negotiation' to account for this, which may explain the simultaneous impulses towards predictability *and* flexibility in structure [14]. Drass proposed that the doctor and patient have individual needs for the encounter, which may or may not align. Both work towards the accomplishment of their needs by using smaller units of discourse flexibly (e.g. speech acts, turns, sequences and phases). Flexibility is needed as there is no 'set formula' for the work that will be required to meet a need. The units of discourse are then linked together through the process of dyadic interaction to produce the structure as a whole. However, this 'structured negotiation' occurs in the context of an (institutional) interaction which has an over-arching structure of chronological tasks to be accomplished by the doctor. Thus *both* 'top down' and 'bottom up' processes influence the resulting structure.

Meeuwesen and colleagues noted that whilst doctors mainly acted to drive the conversation *forwards* in terms of the chronological order of the phases – effectively in order to accomplish their *standing agenda* – sometimes either they or the patient would move the consultation *"backwards"* [12,17]. This *bidirectional* flow appeared to be particularly evident in later stages of the consultation, where diagnosis and

treatment are discussed, as the participants negotiate more keenly to ensure that their perspectives are aired and needs addressed [12,14,17].

In the 'prescriptive' literature, a variety of clinical communication models used in medical education internationally provide templates of the structure of the consultation (e.g. 8, 22-26]. In line with Byrne and Long's approach [13], all of these define the *doctor's* core tasks for the consultation, set in broadly chronological order. These include *building rapport, establishing the agenda, gathering and sharing information, discussing the way forward* and *consolidating an agreed plan*. By defining the consultation blueprint as an *ordered set of stages*, educational models aim to ensure that medical students and doctors accomplish their goals for patient care predictably and efficiently.

Yet despite the widespread use of such models in undergraduate and postgraduate education and assessment, little recent research has *examined the structure* of the medical consultation and whether it *corresponds to taught models*. This calls into question the assumption that consultations follow a predictable format in terms of the *presence* and *chronology* of expected phases.

One study of the structure of *veterinary* consultations [27] found that most consultations did not follow the order of stages proposed by the Calgary-Cambridge Guide to the Medical Interview [8], which is also used in veterinary education [28]. Rather, consultation stages were observed to occur in an iterative manner, with *information gathering, explanation* and *planning* appearing throughout the consultation, interspersed with *physical examination*. Similarly to Byrne and Long's [13] work in primary care, the veterinary appointments comprised a variety of types of consultation, including new and pre-existing problems and routine tasks such as vaccination.

More recently Manalastas and colleagues [29] described an original method for examining the structure of medical consultations by allocating all doctor-patient talk into phases (based on the Calgary-Cambridge Guide to the Medical Interview) and constructing diagrams to visualise consultation organisation. When applied to simulated consultations from a postgraduate examination portraying a medical outpatient 'history-taking' appointment, the predicted phases were observed in a broadly chronological order. The majority of consultations began with *initiating*, featured a dominant phase of *gathering information*, and included lesser amounts of *summary, explanation, planning* and *closing*. Unlike the studies in primary care and veterinary medicine [13,27], the consultations were relatively homogenous, due to the standardisation of scenarios, duration and marking criteria. Nonetheless, the presence, order and frequency of appearance of phases varied, even within consultations from the same scenario. Some phases appeared earlier than expected, and there was considerable variation in the location and quantity of talk related to *explanation* about the condition and *planning* of investigations/treatment, and whether these occurred once or as intertwined phases.

This raises the question of whether a different type of consultation, where the doctor's main task is to *share information,* will show a similar structure to consultations focusing on initial 'history taking'. Educational models propose a broadly similar structure across consultation types, albeit with a greater proportion of talk allocated to *explanation* and *planning* if these are the doctor's dominant tasks. However as previously discussed, other explanatory frameworks predict less adherence to an expected phase structure in consultations focusing on *explanation* and *planning* [12,14,17]. Moreover, empirical observations suggest that variability of structure is to be expected [12,13,15-17,27].

The present study aimed to address the following questions:

1. Do consultations in which the doctor's main task is to *share information* exhibit an *organised structure* comprising a series of *chronological* phases, corresponding to the broad tasks of the doctor outlined by an established educational model of communication in the consultation?
2. Are the consultations organised in a sequence of consultation stages, that includes *all the expected stages*, occurring in the *expected chronological order*?
3. What is a '*typical structure'* of consultations in which the doctor's main focus is to *share information*?

2. Materials and Methods

2.1 Design

This was an observational study examining the structure of medical consultations, through classifying the talk in simulated consultations from a postgraduate examination into consultation phases proposed by an established educational model of clinical communication.

2.2 Participants

The participants were doctors taking a postgraduate examination recorded at one examination centre during a two-week period in 2012 [30]. Seventy six of 103 (74%) candidates consented and were successfully recorded. Participants were 53% (N=40) female, with a mean age of 31.7 years (SD 5.3); 46% (N=35) with a primary medical qualification from the United Kingdom, 13% (N=10) from the European Union and 41% (N=31) from international medical schools.

2.3 Setting

The consultations were from the 'communication skills and ethics' station of the Membership of the Royal Colleges of Physicians of the United Kingdom (MRCPUK) Practical Assessment of Clinical and Examination Skills, which contributes to a postgraduate Diploma that qualifies general hospital physicians to enter specialist training [31,32]. They comprised 14-minute meetings with trained actors portraying a simulated patient or relative in a general medical hospital scenario, with no physical examination. The nine scenarios in the station (range of 4-20 consultations per scenario) focused on tasks such as sharing information about diagnosis, breaking bad news, or discussing difficult, sensitive or ethical issues**.** For example, the doctor might be expected to explain the results of investigations, share a new diagnosis or disclose a medical error, and in each case discuss appropriate next steps. The marking criteria comprised global ratings in four domains *(clinical communication, clinical judgement, managing patient concerns and maintaining patient welfare).*

2.4 Data preparation

The transcripts were prepared by one member of the team (RV). The video-recordings were converted to audiofiles, transcribed verbatim, redacted for any identifying details and randomised to avoid consultations from the same scenario or date appearing in close proximity. The coders (GM and LN) worked with the anonymised transcripts and were blind to any participant characteristics.

2.5 Measures

The Calgary-Cambridge Guide to the Medical Interview [8, 33-35] was chosen as the educational model, as it is widely used in the United Kingdom and internationally, and is applicable to all medical specialities. Using the method described by Manalastas and colleagues [29], the 73 'communication process skills' of the

Calgary-Cambridge Guide [8] were used to categorise all doctor-patient/relative talk into six phases relating to the following tasks of the doctor:

Initiating

- greetings and introductions
- identifying the reasons for the consultation

Gathering information

- questioning and exploring the medical problem(s), effects on the person's life and concerns

Summary

- summarising what the person has said, e.g. at the end of a line of enquiry or section of the consultation

Explanation

- providing information and discussing the problem (e.g. diagnosis, ethical issue)

Planning

- providing information and discussing the way forward (e.g. investigations, treatment)

Closing

- checking for any final questions, safety netting and/or clarifying the plan.

2.6 Coding

The extract in Table 1 illustrates how talk was allocated to the phases. This shows the first 20 turns at talk from one consultation, which were classified as *Initiating, Gathering information,* and *Explanation.*

Table 1 about here

Due to the level of detail in the 'communication process skills', there were few coding disagreements. The two raters (GM & LN) had previously achieved inter-rater reliability of 95.3% agreement in the allocation of turns to phases [29]. In this study the lead coder (GM) coded all 76 consultations and inter-rater reliability between coders (GM & LN) was checked for 33% of consultations (N=25). The raters agreed on the phase allocated to 97.9% (3,910/3,993) of turns. This reflected 13 instances of disagreement of phase allocation affecting 83 turns in eight consultations (as phases usually comprised several turns). Coding disagreements related to:

- Interludes of questioning (e.g. about family medical history) during *Explanation* or *Planning*, representing brief forays into *Gathering Information*
- Whether questioning was acting to establish the purpose of the consultation *(Initiating)* or had moved into *Gathering information;* at times there was no clear distinction between these phases
- Whether the doctor was providing information *(Explanation)* or summarising information already provided *(Summary),* particularly when the doctor repeatedly reiterated information.

Final agreement on coding was reached through consensus discussion.

2.7 Creating visualisation diagrams

The method devised by Manalastas and colleagues [29] was used to visually display consultation structure. Using standard word processing software, a template comprising 3,000 characters was used to represent 100% of the word count of the talk in a consultation. This was set out in 50 rows of text with 60 characters on each row, so that each row comprised 2% of the total talk.

The word count in each phase of the consultation was converted into percentages that could be placed onto the template. An example of the percentages of text allocated to each phase is given in Table 2.

Table 2 about here

The percentages were placed onto the template in the order of occurrence. An example of the visualisation created is given in Figure 1. The colour-coded phases are named on the right of the Figure. The visualisation is designed to be read left-to-right and down, line by line. For example, the first 2.5 lines represent the 4.9% of talk in the *Initiating* phase, which is followed by a longer spell of *Gathering information* (8.2%). All 76 consultations were converted into these diagrams.

Figure 1 about here

2.8 Ethics

The data collection was conducted with ethics approval from the Institute of Education, University of London and permission from MRCPUK, and the current project was conducted with approval from UCL Research Ethics Committee and permission of MRCPUK.

3. Results

3.1 Presence of phases

All phases were observed across the data set. A fifth of consultations contained all six phases; three quarters omitted one or two (Table 3).

***Table 3 about here ***

Explanation and *Planning* were present in all consultations; *Closing* and *Summary* were the most frequently omitted (Table 4).

***Table 4 about here ***

A quarter of doctors completed their consultations within the allocated time, and these all ended with *Closing* (Table 5). Of those still ongoing as time expired, the majority were in *Planning*.

***Table 5 about here ***

3.2 Order of phases

In the set of 76 consultations, there were *no* consultations that included *all the phases,* with each phase appearing in the *expected chronological order* and each phase appearing *only once.*

Over half of the consultations (43/76) exhibited phases appearing in the expected order in terms of their *first* appearance, but only two of these contained all six phases. In the 33 consultations where phases did not appear in the expected chronological order, the majority (28/33) related to the appearance of *Explanation* and/or *Planning* before *Gathering information*.

3.3 Discreteness of phases

The re-appearance and intertwining of phases were common. *Explanation* and *Planning* appeared more than once in all consultations, and *Gathering information* appeared more than once in just under half of consultations (Table 6).

***Table 6 about here ***

3.4 Proportion of talk allocated to phases

The greatest proportion of talk was allocated to *Planning*, comprising a mean of 45% of talk per consultation, followed by *Explanation*, with a mean of 30% (Table 7). Together, they accounted for three quarters of the talk on average per consultation, with a range of 41-92%.

***Table 7 about here ***

The distribution of talk across phases is shown visually in Chart 1. The zero bars have been highlighted, showing the frequency of consultations omitting *Initiating, Gathering information, Summary* or *Closing*.

Chart 1 about here

3.5 Comparison of consultation structure using visualisations

The visualisation diagrams for the 76 consultations are shown grouped by scenario in Figures 2 and 3. The majority of consultations were dominated by intertwined *Explanation* (pink) and *Planning* (purple)*,* although some consultations were characterised by these phases occurring in relatively discrete blocks.

***Figures 2 and 3 about here ***

The consultation diagrams show how *Gathering information* (teal) and *Summary* (blue) were present in variable amounts and at variable locations in the consultations. For example, in the 64 consultations that included *Gathering information,* it occurred immediately after *Initiating* in just over half (36/64). In some consultations, *Gathering information* appeared at multiple points, and in a minority featured only in the second half. The variability in the amount of *Gathering information* (as noted in Chart 1), is visible in the diagrams, ranging from none to just under half the consultation. Similarly, *Summary* (blue), which appeared in just over a third of consultations, varied in its location, frequency of appearance and which phases preceded it.

Initiating (pale pink) was present in almost all the consultations and was the sole phase occurring only once and at a single location, i.e. at the beginning. *Closing* (brown) generally occurred towards the end, although occasionally the talk revisited earlier phases, particularly *Explanation* and/or *Planning.*

Grouped by scenario, a few broad similarities were apparent in some of the batches. The consultations in scenario 1 often contained multiple episodes of intertwined *Explanation* and *Planning,* whereas scenarios 2 and 3 often included larger blocks of *Planning.* Most of the consultations in scenarios 7 and 9 contained a greater proportion of *Gathering information* than scenarios 1, 2 or 3. Nonetheless, overall there was no discernible consistency of structure, either across the whole set of consultations, nor within consultations from the same scenario, in terms of the *order* or *presence* of phases, *amount of talk* per phase, *location* or *number of times* each phase appeared.

4. Discussion

4.1 Discussion

The structural organisation of consultations in which doctors were tasked with *sharing information* bore little resemblance to the sequence of phases predicted by an established, internationally used educational model of the medical consultation. Consultation phases were evident; indeed, all talk could be allocated to the predicted phases, and all predicted phases were identified across the set of consultations. Nonetheless, there was considerable variation in the presence, order, frequency and quantity of talk allocated to the phases, across all the consultations and within consultations from the same scenario. There was no 'typical' structure, either that could be considered to epitomise the structural organisation of a consultation from this postgraduate examination station, or in response to any of the scenarios.
This finding of variable structure is congruent with the few studies that have attempted to map out the phases of consultations, which have similarly found that a chronological order of phases, that appear only once, is not the norm [13,27].

Rather, phases can reappear, be intertwined, or be entirely absent. Even so, the dissimilarity of structure is still surprising, given the relative homogeneity of consultations in this standardised examination setting. Considerably more variation was observed in these consultations than those from a 'history taking' station [29]. This suggests that educational models of the consultation are more applicable to the first, *clerking* consultation, in which the doctor follows a predictable protocol to establish the patient's medical history and define the initial next steps. Conversely, in consultations to *share information,* the variability of observed structure within and across scenarios suggests an *absence* of a predictable protocol.

This study did not have access to outcome data such as patient/relative satisfaction that might shed light on any relationship between structural organisation and consultation 'effectiveness'. Whilst Byrne and Long [13] noted that the reappearance of phases was associated with *doctor* dissatisfaction, the literature remains silent on patients' views about consultation structure, or the congruence between patients and doctors on this matter. An intertwined phase structure may be perceived by consultation participants as reflecting a flexible and responsive approach, or a lack of coherent organisation. Likewise, the relationship between structure and other outcomes – such as patient understanding, recall, or autonomy – remains unknown. Whilst educational models *propose* a chronological order of phases, there is no specific guidance *cautioning against* reversion to earlier phases. Both 'prescriptive' and 'descriptive' literatures, therefore, have scope to further explore the importance of structural organisation in manifesting consultation quality.

The marked variability in consultation structure suggested that the flexible process of 'conversational discourse' was more of a feature than the predictable, 'ritualised' elements associated with 'institutional talk'. This lends weight to the notion that

'bottom up' processes, related to the participants seeking to meet their needs at a more 'micro-level', were having a greater influence than the impetus to progress an over-arching structure. Consequently this supports the application of the 'conflict negotiation' approach as an explanatory framework in the construction of the consultation [14]. Likewise the current findings align with the observation that this is particularly relevant to the tasks of *explanation* and *planning* [12,17]. The findings are also congruent with observation of 'institutional talk' observed in a different setting (veterinary practice) [27].

One obvious question is about the relative contributions of the consultation participants in driving consultation structure. The variability *within* scenarios did not suggest that the simulated patients/relatives were acting as the dominant force; consequently this points to the doctor as the key driver of structure [29].

The method used in the present study was chosen to compare consultations with an educational model focusing on the *doctor's main tasks*. These tasks, and constituent 'process skills', give rise to 'structure' in this paradigm, and are primarily manifested through the *content of verbal communication*. This conception of the consultation reflects the value placed in medical care on the *exchange of information*, where *'information'* (relating to the medical condition, medical care and patient/relative questions or concerns) is primarily communicated through words. Other research paradigms (and associated methodological approaches) examine different forms of structure arising from talk, or explore structure in different ways (e.g. considering a broader range of communicative behaviours). The present study is therefore limited by its focus only on verbal communication, the pre-defined ('top down') approach to structure, and the prioritisation of one participant's goals. Future research would

benefit from exploring consultation structure using other paradigms and considering multiple perspectives.

4.2 Conclusions

This study found poor congruence between the observed behaviour of doctors and a 'prescriptive' model of consultation structure widely used in medical education. There was no 'typical structure' of consultations in which the doctor's main task was to *share information*, even in the relatively homogenous context of a single station from a postgraduate examination. Consultations were characterised by flexible and iterative (rather than chronological) use of phases, with intertwined *explanation* and *planning* interspersed with interludes of *gathering information* and occasionally *summary,* in an unpredictable order.

4.3 Practice implications

Educational guidance for clinical communication must take account of observational research examining how doctors organise consultations in practice. If consultations do not follow the expected structure, it begs the question as to whether guidance reflects clinical practice realistically enough to help to prepare graduates for their real world experiences.

The literature examining the structural organisation of medical consultations is sparse, and has focused exclusively on structure in relation to the doctor's tasks for the consultation. This signals a need for empirical investigation of structure examining a broader range of communication goals and processes, and across different medical settings. Future research should consider its relationship to consultation outcomes and its role in facilitating patient-centred care and patient autonomy.

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Competing interests

The authors have no competing interests

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consultation structure, Calgary-Cambridge Guide, patient-centred communication, patient autonomy, clinical communication, medical education, postgraduate assessment

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Table 1. Example of how talk was allocated to phases (Participant 23).

Chronological turns at talk	Phase	Content from Calgary-Cambridge Guide communication process skills
1. DOC Hi, [patient title+surname], I'm Dr [name], nice to meet you. 2. PAT Hello, nice to meet you. 3. DOC Hello. Yes, uh, today, um, I wanted to have, uh, discussions with you about the... 4. PAT Uh-huh. 5. DOC You know, the diagnosis that we have done recently. 6. PAT Okay. 7. DOC About the test results. 8. PAT Fine, about the thing in the [body system]? 9. DOC Yes, yes. 10. PAT Yes, yeah.	Initiating	Establishing initial rapport: greets patient, introduces self; identifying the reason(s) for the consultation

11. DOC How are you doing now? 12. PAT Um, it was not so bad, um, it was, you know, obviously it wasn't, it wasn't good when it didn't work... 13. DOC Mmh. 14. PAT Uh, the medication didn't work, but, um, you know, it, it seems to be getting better at the moment. 15. DOC All right, okay. Oh, you feel better? 16. PAT [Coughing]. Yeah. 17. DOC That is good. 18. PAT Yeah.	Gathering information	Exploring patient's problems; uses open and closed questioning techniques, facilitates patient's responses
19. DOC But, you know, um, I would like to explain you about the, you know, the results. So first of all, how much have you been told about your condition? 20. PAT Um, I just got the, I mean, so that's why I wanted to speak to you because I think I've got [medical condition] and I've got the tests.	Explanation	Providing the correct amount and type of information; assesses the patient's starting point

Table 2. Allocating talk to phases (Participant 42).

Order of phase in the consultation	Phase	Word count	Percentage of total consultation
1	Initiating	116	4.9%
2	Gathering information	195	8.2%
3	Explanation	548	23.0%
4	Planning	110	4.6%
5	Explanation	398	16.7%
6	Planning	127	5.3%
7	Explanation	216	9.1%
8	Planning	373	15.7%
9	Examiner time warning	5	0.2%
10	Summary	255	10.7%
11	Closing	35	1.5%
Total		**2378**	100%

Table 3. Number of phases present in each consultation.

No. of phases	No. of consultations
6	15
5	29
4	29
3	3
Total	**76**

Table 4. Number of consultations containing each phase.

Phase	No. of consultations
Initiating	75
Gathering information	64
Explanation	76
Planning	76
Summary	27
Closing	42

Table 5. Phase as the consultation ended.

Phase	No. of completed consultations	No. of time-expired consultations	Total
Explanation	0	2	2
Planning	0	37	37
Closing	19	18	37
Total	**19**	**57**	**76**

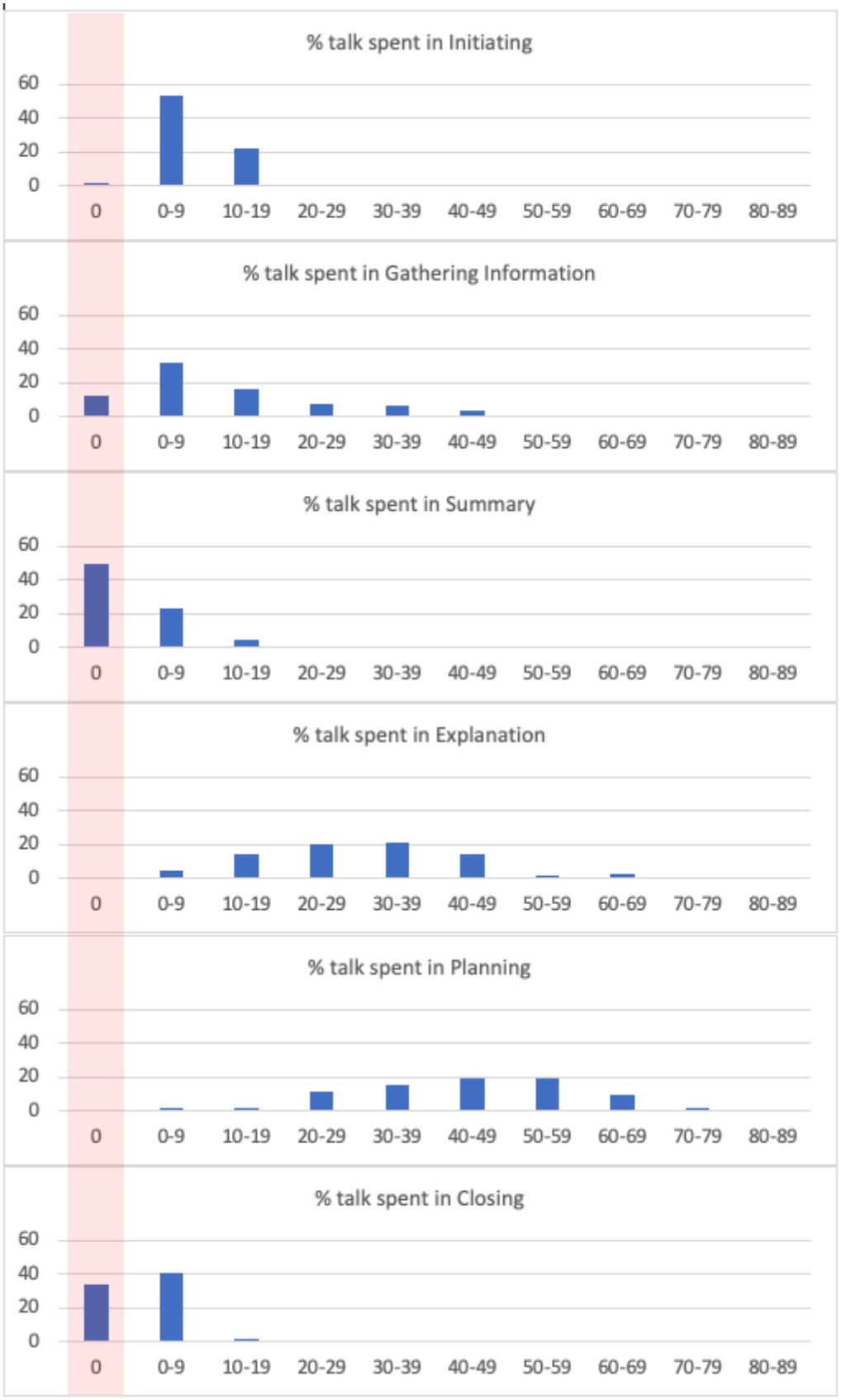
Table 6. Frequency of phases appearing multiple times.

Phase	No. of consultations containing phase	No. of consultations where phase appeared more than once
Initiating	75	0
Gathering Information	64	35
Explanation	76	76
Planning	76	76
Summary	27	9
Closing	42	7

Table 7. Mean proportion of talk allocated to phases.

Phase	Word count		Word percentage	
	Mean (SD)	Range	Mean (SD)	Range
Initiating	184 (98)	0-425	8 (4)	0-17
Gathering information	289 (291)	0-1117	12 (12)	0-48
Explanation	729 (335)	94-1500	30 (13)	4-65
Planning	1077 (353)	73-1900	45 (14)	3-72
Combined Explanation and Planning	1806 (374)	927-2793	75 (11)	41-92
Summary	49 (83)	0-334	2 (4)	0-16
Closing	59 (74)	0-315	2 (3)	0-12

Chart 1. Proportion of talk by phase across the consultations.



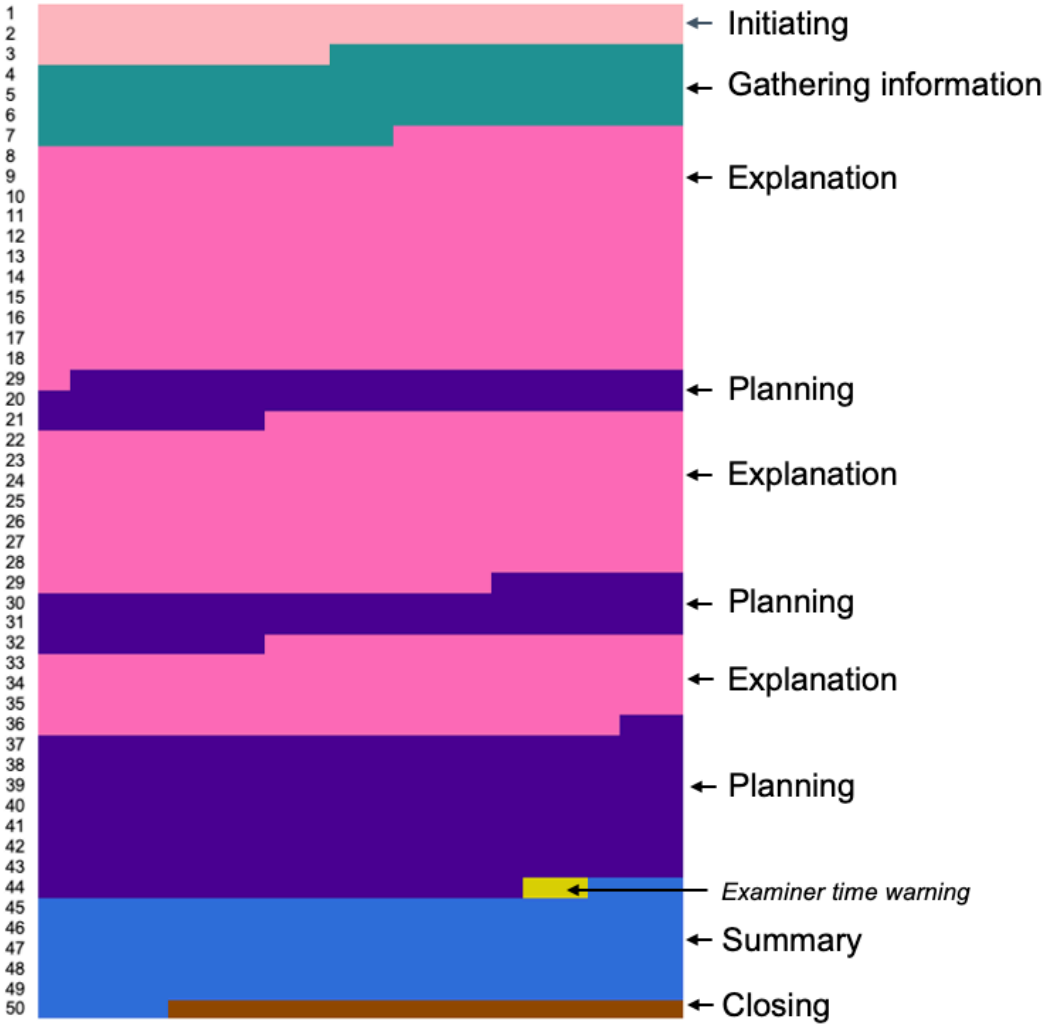


Figure 1. Visualisation of consultation structure (Participant 42).

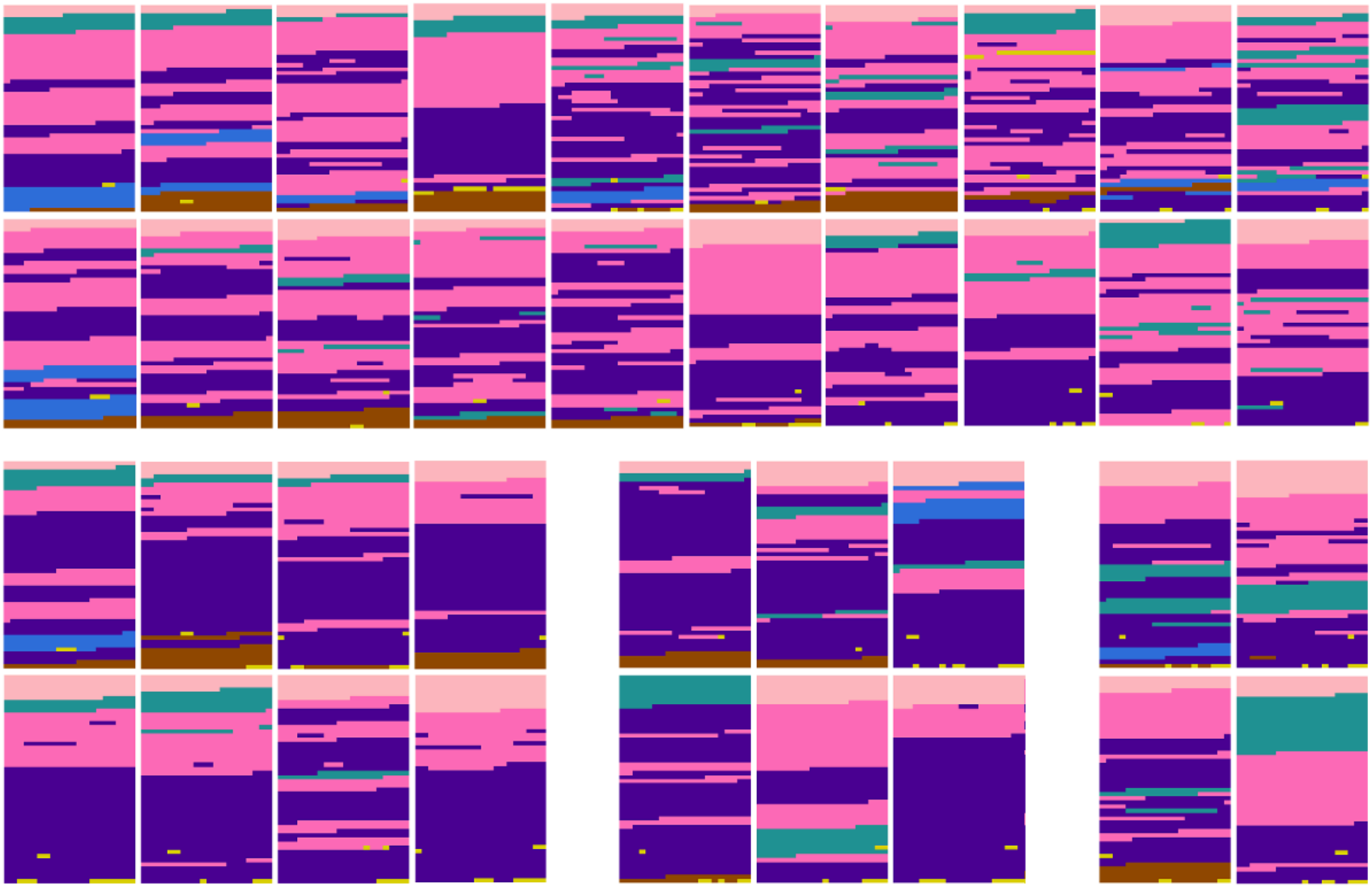


Figure 2. Summary of visualisations by scenario. Left to right, top row, scenario 1 (N=20), bottom row scenarios 2 (N=8), 3 (N=6) and 4 (N=4).

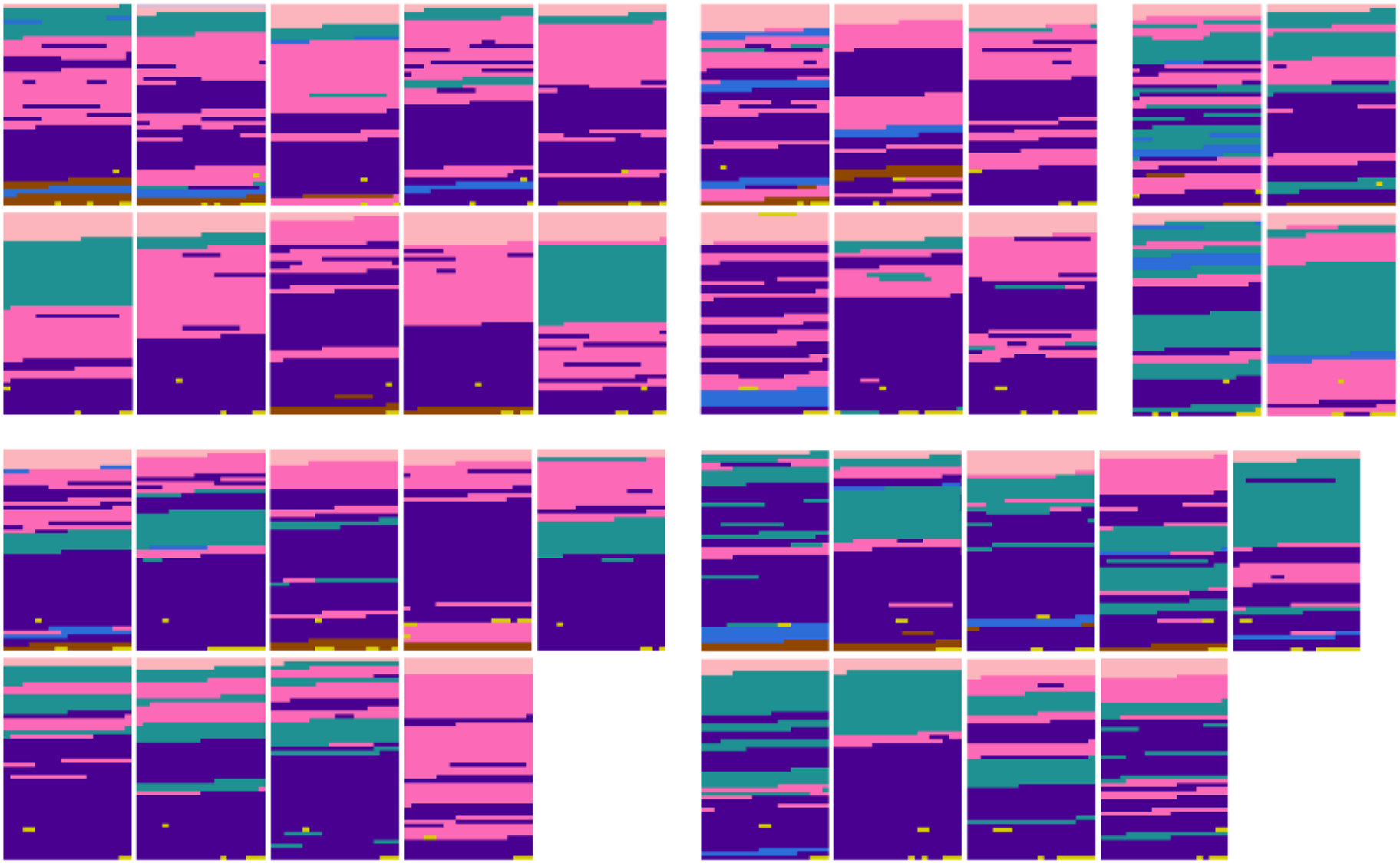


Figure 3. Summary of visualisations by scenario. Left to right, top row, scenarios 5 (N=10), 6 (N=6) and 7 (N=4), bottom row scenarios 8 (N=9) and 9 (N=9).